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BIRD NOTES

from

40 Selborne Drive

Piedmont, California

1933 to 1939

by

Ernest I. Dyer

PART VII

January 1, 1938, to April 24, 1939 . . . . . pp. 1579-1802

(first part of Dec. 31, 1937 is bound

in part VI, on p. 1578)

Subject: mainly Thrashers, Road-runners

(pages 1796 to 1802 were written by Julio)

It may have been the threat of hawks that kept Neo home all day, instead of out on his frontier exchanging song with that other thrasher to the north east.

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1938

January 1st.,1938. (Sunrise 7:25, sunset 5:01).

At about 8 A.M. (Julio) Rhody was still in his roost; but at 8:45, I found he had shifted to the house. (Cloudy, calm,46°). Thus far, his morning shift to the house seems to have been for the sake of warmth and has occurred on mornings when the sun has not been strong enough to furnish enough warmth in the open.

There was early thrasher song, but Neo was not seen all day.

At 9:45 Rhody was still in the house, but at 11:15, as I returned from a short absence, he was just accepting Julio's invitation to come to the tool-house for a mouse. This job finished, he retired to the bank by the orchard and stayed there for 4½ hours on end, and did not reach his final roosting place in the eucalyptus until precisely 5:01 (curiously the exact time of the "official" sunset for the day. Hawks had been here in the forenoon and one sailed along the orchard path as Rhody was working his way up through the ladder tree, not more than 30 feet from him. This caused the road-runner to observe special precautions before making his last leap. Altogether he took over an hour to reach his roost from the bank: a distance (counting climb) of perhaps not more than 50 feet.

Besides the mouse, he ate one salamander about 3:45--a creature that he does not care much for, as it is slimy and tough.

It looked like rain, and the forecast was for rain during the night, so his selection of roosting place was perhaps a mistake.

Jan. 2nd. (Sunrise 7:25, sunset 5:02).

Well, it did rain during the night and Rhody was found in his house at 7:30 A.M. by Julio. It is not known when he made the shift.

There was much thrasher song in the early morning, wandering from place to place. Neo was the suspected author. Finally it seemed to stay at one place off to the north-west. At 10 A.M., as it still continued, I went out to investigate.

The Thrashers' Echo-Tree.

A thrasher was singing from the top of a stunted Scotch pine growing amongst baccharis on the slope 40 or 50 yards from the N.W. corner of this property. Echos were coming from all directions. This is the same isolated tree that Brownie used often as a singing post and I have always thought (as these notes show) that echoes of his own song,coming from so many directions, excited him and stimulated him into competitive song with non-existent territorial competitors. The present singer was thought to be Neo. At first so intent was he upon his song, he would pay no attention to my calls and worm-gestures, but in a few minutes he dropped down and ran up through the brush for his worms. It was, of course, Neo. His bill was caked with mud. (Like other thrashers, he seemed indifferent to such untidiness). When I stopped giving him worms he went back to the tree and resumed song. During all this time I was unable to detect the presence of any other thrasher, near or far, even when Neo was silent, which was not often. When he sang "thrashers" were everywhere, as he also doubtless thought.

The sun was now shining brightly, so I went to look up Rhody, leaving Neo with his delusions. Rhody was now on the bank at the orchard sunning. His tail was pretty well mussed up, so I imagine he did not seek shelter of the house until it was light enough for him to see well. He was quite ready for a mouse.

About 11:30 thrasher song had shifted to the north-east and I suspected that Neo had gone to the cork-elm to exchange songs with his rival that holds forth in the back garden of the house on Estates Drive, which extends all the way through to Inverleith Terrace. I was able to see him from here in the tree and drove over there. He was singing loudly and Inver (the other bird) was answering in much more subdued tones from his garden. In a half hour all song ceased and Neo disappeared.

4:40 P.M. There has been no more thrasher song up to now. Rhody began his upward climb to his roost in the eucalyptus at 4:34. Since 10 A.M. he divided his time among three places: the bank by the orchard, the roof of the cage and the acacia near his roost. He appears to have been satisfied with the one mouse. (Cloudy, calm, 50°)
At 4:48 he was in his roost.

Jan. 3rd.

No early thrasher song this bright and sunny morning--fog at lower levels.

At 8:35A.M. Rhody was already up and sunning on his favored eucalyptus branch on the south bank.

Neo discovered me while I was looking for Rhody and was rewarded with worms. The initiative was his. When I returned to the house he uttered several loud musical phrases and stopped.
At 9:45, as I approached the glade, there were two thrashers there. One, Neo, came at once for worms; the other faded away, although not especially frightened. There had been no "talking".

Tentative deductions based on foregoing observations.

These observations suggest:
That there was no early morning song because Neo was home and the other bird was somewhere nearby, and was friendly, hence presumably a female. Consequently there was no necessity for defending territory, no need to announce that he was at home and looking for a mate. When I left his calls were to bring the new bird back from wherever she had (inferentially) gone when I made my first appearance.
At 10:10 I went back, whistled and called. Everything had been quiet in the meantime. Neo came through his passage way from the bank, eager for worms. He is still very shy; any movement of the body toward him causes instant retreat. There were no indication of the presence of another bird. When I left and turned up the driveway I was surprised to find that Neo had followed, so rewarded him. I now went down to the street to look for Rhody (not seeing him). Neo mounted to the top of a rose-bush growing on the fence and began scripping, looking in my direction. I returned (after a passing automobile had silenced him and frightened him into seclusion) and stood in the driveway. He came out soon without being called and began to peck in the ground near me, keeping an eye on me and was again rewarded.
Rhody now sailed down from an ironwood tree (where I had not seen him for months) and trotted up the road behind me, pausing at one point to emit one loud rattle-boo, to the tool-house for his mouse. (10:45).

Rhody returns to old sleeping place.

4:11 P.M. Rhody, for some obscure reason, elected to return to his old house in the oak on the west lot, arriving there at 3:57 P.M. When I saw him start in that direction at 3:15, I followed. He followed his old route, even dusting in the accustomed place just outside the side gate. (He had had a second mouse at 2:15, as the first one was small. At the time it was anticipated that he would want another and, when I looked him up after a short absence, he greeted me with a rattle-boo and hastened to follow to the tool-house).

His first witnessed encounter with Red-tailed hawk.

ladder

When he was about half-way through the roost tree he suddenly straightened up and looked keenly to the south, then dropped to the ground and disappeared rapidly. A Red-tailed hawk glided about 15 feet above the ladder-tree, reversed its course and now circled about the tree at an altitude of about 30 feet, making four or five complete circles of about 25 yards diameter, eyeing the ground closely, then sailed off to the north, not having moved a wing . He had made no attack upon Rhody, but I think that bird was the center of his interest just the same. It is the first time I have seen one so near Rhody and the first time I have seen Rhody frightened by one. I was standing at the ladder-tree at the time and the hawk was so near that I could see the individual feathers on its body.

R panicky.

I found Rhody had not gone far, but he was still frightened, and when two noisy aeroplanes passed overhead just as a noisy truck with a clanking load of metal turned the corner, he darted in all directions through the brush--the only time I have seen him really panicky.

However, he recovered in about ten minutes and once more ascended the ladder-tree and was in his house, as far to the rear as he could get, at 3:57. I wondered if he had not regretted his decision to change his roost when he got this unexpected scare, and half expected him to go back to the eucalyptus tree.

There was no meteorological reason why he should change his roost, as far as I could see. (At 4:11, calm, sunny, 53°).

Neo was not again contacted during the day, but thrasher song was heard frequently off to the north-west.

Jan. 4th. (Sunrise 7:26, sunset 5:03).

Considerable early thrasher song, wandering about, but mostly off to the west.

At 8:30 A.M. (partly cloudy, light wind from the north, 46°) Neo was not at his location on the south bank, but there was loud thrasher song several hundred yards away down in the canyon to the west. (It may be that Neo and the bird Poni (west) are the same).

I did not go down to look up Rhody.

Rhody's first Spring Song of the Year 1938.

At 9:35 A.M. Rhody was at his old post in the west lot. I went to the fence at the Clearing and imitated his coo-song. He glanced in my direction, lowered his head and favored me with his full song! Last year it was first heard on the third of January. Yesterday, the anniversary, I cooed to him, but he would not respond. I consider it remarkable that, on two successive years, he should arrive at the same physical and psychical state of being at so nearly the same calendar day. This seems all the more noteworthy in view of the undoubted fact that, however slight the change may have been, he is, this year, further advanced in domestication than last; he is more closely reliant upon man-provided food and shelter.

After his first song Rhody walked into the bushes and I came back to write this note, returning to the Clearing at about 10 A.M.

Rhody sings more.

I found Rhody had returned to his post and Mrs. Scamell was watching him from her garden. I imitated his song and got immediate response. Thereafter he sang frequently. I called Mrs. Scamell's attention to distant thrasher song down in the canyon--there was none nearby.

A Thrasher-Roadrunner Party.

Neo comes.

Another one comes.

N talks continuously.

I continued my conversation with my neighbor and Rhody (who sang frequently from his post without approaching me) forgetting all about the thrashers, when unexpectedly, soft thrasher under-song was heard just over the fence to the west, and a thrasher was seen sitting in the top of a baccharis bush facing me fifteen feet away. Soon another one appeared near him. The first one, after some delay, came to the fence for worms. It was Neo where neither of us had seen the other before. The song below had ceased and I am inclined to think Neo was the singer and that he had heard all the conversation with Rhody and had come to be "in on" the party. While taking worms he kept up a continuous talk with the other (silent) bird. This bird approached to within 6 feet, but kept pretty well concealed in the bushes, though coming out into the open at times. I was not able to see whether it had been banded. (Thought it might have been Okii or Chiisai--especially the latter).

Rhody joins us.

All three birds in the Clearing.

Rhody (about 10:15) now came to the fence hopefully, so I left to get him a mouse. On returning I found Neo in plain sight on the fence talking to the other bird in the bushes below him. Rhody came over and got his mouse, ate it and instead of going away, remained at my feet to sun his back. I got Neo to come to me in the clearing also; then the other bird followed, and for a time I had all three birds near me and in full view--Neo and Rhody calm and collected, but the other one nervous and unwilling to stay long.

Neo in full song.

All three birds finally (about 10:45) went back into the west lot and, as I left, Neo began full song.

I had thought that Rhody might take the mouse and carry it about as further evidence of his aroused mating instinct; but he did not. (Sunny, [illegible]°).

Another meeting with Neo

Friend with him?

Thrasher full-song was heard at intervals off to the west all the forenoon and, at a time when it appeared to be closer (12:15 P. M.) I went down to investigate. A thrasher was singing from a fence about 50 yards from the west line. I waved at it. Soon it stopped, dropped into the dense growth of Baccharis and, when I went to the west fence, it came out for worms, talking continuously. Neo, of course and, presumably (because of the talk) the other was not far away. He was singing in the "Echo Territory" near the "Echo tree".

Neo and Rhody both come.

R again in old house.

Neo comes to car, mate(?) is nearby.

On my way home, with a fresh lot of mice for Rhody, I heard, as I passed the corner of Selborne and Sandringham Road, thrashers talking in low tones on the west lot (3:35 P.M.). I stopped the car, walked across the street and Neo came out for worms--still talking. In much less than a minute Rhody rushed out and, as I returned to the car, followed part way; so I gave him a brand new, buff-colored mouse. I took the ~~mouse~~ mice home and returned. Rhody was already in his old house.* Neo, still talking, wanted more worms. I caught a glimpse of the other bird. I returned to the car to see if Neo would show fear of the car or be influenced by the fact that he could now see only my head and shoulders. (Not knowing how to distinguish between the two effects). He came down the bank and across the sidewalk to me as soon as I tossed a worm--still talking. Incidentally, this morning he demonstrated ability to catch worms before they struck the ground. It was 4 (?) years before Brownie did this.

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* At 3:49 P.M. Clear, calm, 51°.

Neo makes further progress.

About 5 P.M. Neo was on the north fence. From the driveway in front of the garage (under the house) the fence can not be seen on account of the hedge. Yet Neo came up from the fence, through the hedge on top of the retaining wall and to Julio on the driveway, to get worms. His mate(?) followed part way. If she stays with Neo she will become tame by following Neo's example, just as Greenie followed Brownie's.

Males bolder and more easily tamed?

The evidence (inconclusive) so far is that the males are more readily tamed than the females, at least when adult and free. Thus Brownie and Neo tamed readily. Greenie, B's first mate, less readily. Nova, B's second, not at all. This new bird, yet unnamed, supposed to be a female, is yet an unknown quantity, but seems to have possibilities. It is really up to Neo to do his part, which so far he has. In fact he has done it all! (Thanks to that great civilizer, the Meal Worm).

Neo sings after sunset.

At 5:10 P.M. (7 minutes after sunset) Neo was singing full song near the west fence. I thought I could hear another one reply.

Notes on Coues' Description of Road-runner

I dropped in on Dr. Grinnell this afternoon and, while looking over his set of Coues' Key to North American Birds, 5th. Ed., 1903, pp605-7, noted the following:

Alternative names: Ground Cuckoo, Chaparral Cock, Snake Killer, Lizard Bird, Paisano, Correcamino, Churca. Of these the last is new to me.

The drawing is the best I have seen, in any book, of a road-runner. G thinks it is from Brehm's Thierleben. (Must look up). Curiously, however, although the drawing is on a large enough scale for such a detail to show, there is no indication of the brassy ring about the pupil of the eye, which is the most characteristic and striking feature of that organ, nor does the text mention it.

I was astonished also that such an accurate observer as Coues should state that the iris is red!! Unless this was a mere slip, he could never have seen a living road-runner close at hand, or else his color sense was defective.

He says: They are singular birds--cuckoos compounded of a chicken and a magpie."

Jan, 5th. (Sunrise 7:26, sunset 5:04).

Thrasher song was heard almost continuously, from the west, from 7:10 A.M. until 8:40 A.M. Probably Neo. (Partly cloudy light north wind, 42°, at 8:40).

Rhody's rising time was not taken, but he spent most of the forenoon on the west lot.

At 11:15 I went to the hypothetical No-mansland between Neo's and Inver's territories, having heard no song since 8:40. As I approached the cork-elm a thrasher full-song was heard and a thrasher was in the elm; but this was not the singer, he was in the baccharis and soon appeared on top of a bush 15 feet from me, talking now. At the same time Inver was singing from his garden. Neo came to the sidewalk for worms. The bird in the tree shortly also came to the sidewalk, but never closer to me than about ten feet. She was well aware of the worm feast that Neo was getting and wanted to participate. Neo continued to talk to her and, at times when she was momentarily out of his sight, showed concern and looked for her, his talk seeming to change its tenor. Several times I tossed worms to her far over Neo's head; but despite his

Neo's mate accepts worms.

evident solicitude for her welfare, he wanted the worms himself and got nearly all of them; but at last, his mate began to get them though still frightened by my throwing motions. This seems to mark the beginning of her recognition of the inevitable! Until my worm supply gave out and I left, she continued to look for her share, but at a respectful distance.

I had "feared" that this new bird and Inver might be identical and hoped to get some light on the matter by just such a happy accident as occurred. I was able to account for all three birds at the same time. The new bird carried no leg band, but I was unable to determine the color of her irides.

About 2:30 P.M. I went there again. Both birds were present near the elm and Inver was over in his garden. Neo, for a half-hour, kept in close touch with me, talking incessantly. I tried to get him to take worms from hand; he responded well, but could not bring himself to make the one, last reaching motion of head and bill. His mate would not come out of the bushes, but occasionally answered Neo. It was noted that her voice was high pitched and her "phraseology" like Nova's. (Maybe she is Nova). One of Neo's words was za-ree'-ba the initial consonant uncertain. This was also used by Brownie. There was also another of Brownie's words(which escapes me at the moment). When I left Neo resumed full song and kept it up most of the time until sunset; but at that time he had moved to the west of here, and again came to Julio (without his mate) near the garage.

Rhody spent his afternoon on the bank by the orchard and I thought this indicated that he would sleep in the eucalyptus; but at 4 P.M. he began his slow trek toward his old place. His roosting time was not noted. He had a mouse at about 2 P.M. (Sunny, calm).

Jan. 6th. (Sunrise 7:26, sunset 5:05).

At 7 A.M. Neo began to sing near the oval lawn and moved east, when singing stopped.

At 8:35 A.M. (40°) clear, calm, a thrasher near the glade ran away, on seeing me approaching, and hid in the sage patch. This was not like Neo, so I stopped and listened. Neo was talking down on the bank and came out promptly on invitation. The other one remined shy and moved away 40 feet and was digging there when I left. When I got back here, Neo was singing full song again.

A much confused thrasher affair.

At 9:45 I approached the glade. Full thrasher song was heard just ahead of me. Quail, for some reason fled in all directions at my approach, making alarm calls contrary to their usual behavior. This caused the song to stop. When I reached the sage-patch, two thrashers could be seen down on the bank in Neo's domain. I called. Neo came through the regular passageway to me for worms. Another (I supposed his mate) followed. Then a third thrasher. All three were in a group in the path four feet from me. Neo attacked one of them and there was a first-class fight, with birds being knocked over on their backs and feathers flying. All three birds fought. Who fought whom I was unable to see. They went back through the fence and came together 6 feet from me in the honeysuckle, where I could not see them well, and there was much confused conversation in soft, melodious tones. (Thrashers do not appear to make harsh sounds when angry. Oddly enough, as noted before, the harsh haigh--drawn out long--seems to be reserved for use between mates when meeting) I neglected to record that Neo used it once yesterday when discovering his mate after having lost track of her once; the first

time heard from him and tending to confirm their being mates).

I now was successful in inducing Neo to come back through the fence and come to me, notwithstanding the excitement. But the other one came after him and chased him away. Neo was losing. The pursuit went up into the tree over my head and there was much thrashing about there for a few seconds, followed by one bird coming out hurriedly, chased by the other. It was impossible to tell which was which. In the meantime a thrasher (identification was hopeless) had mounted to a climbing rose spray 15 feet from me--while all this was going on--and sang beautifully, without evident excitement, a long and varied full-song, ceasing only when one of the other birds momentarily seemed to threaten it. There may have been four birds present--I do not know. Gradually the scene shifted off to the east, at the Robinsons' whence a medley of thrasher sounds--all musical--proceeded, and at 10 P.M., I came in to write this note.

I gained the distinct impression--which may be absolutely wrong--that Neo's mate(?) at one time, attacked the newcomer and that it was she who climbed the rose and sang while the two males contended for her favor. It should be said, however, that this song was not like the Nova-like effort of hers yesterday, being deeper and more melodious.

It is to be noted, also, that from all appearances, it was Neo that was getting the worst of it--yet, if his object was to drive the other bird away, that objective was attained. Take your choice! I could see no bands on any of these birds--and I looked for them. Before the fight I had also noticed that Neo showed some of his bluish under-down on his rump, that was not visible yesterday.

More ofthe same, "only different."

11 A.M. Well, now, what does this mean? At 10:40 I went to the sage patch. A thrasher was sitting on the same rosebush above referred to. It came for worms; it was Neo with his broken-off tail feather. That was clear. I crouched at one corner of the sage and kept him with me through all the action that followed-- a rare piece of good-fortune. Another thrasher appeared in the rose. I tossed it a worm, which was disregarded. However, it came down into the sage patch--Neo talking continuously. Once he went a little further into the patch toward the other bird. The talk changed; but there was no haigh. He came back. I now heard thrasher talking overhead--Neo being with me. There were two thrashers there in plain sight, in the oak, 10 to 15 feet from me. Both were talking and moving about, interested in each other. Neo continued to talk, but remained on the job with me. One of the birds above whistled softly Brownie's "calling-the-dog". There was a tendency for one to follow the other as it shifted about. Suddenly they came together and a handful of feathers floated down--but no harsh sounds, (Neo still with me--talking--he knew what was afoot overhead--but he stayed on the job. Not his affair? His mate(?) not one of the two?).

The two birds disappeared to the west. Neo soon followed. I could hear them mildly discussing matters in the orchard. I went there, but they had gone farther west and I could not hear them, (Rhody was sunning on the bank by the fig tree). I came in to write this note, having seen no leg bands and no fourth bird positively, though thinking that I did.

11:30. At 11:15 there were no thrashers at the last scene of operations. Rhody was now warming his back on the retaining wall that supports the earth around the fig tree, so I resolved to try my hand on him. Standing 6 feet from him, I coo, cooed to him;

but, although he listened respectfully and turned toward me as if to hear better, he would not "sing." I now koke, koke-koked for him. He reacted to this by raising his crest, looking about and rattling his beak with a soft, fleshy sound, as if made by lips. He responded in this way whenever I koked, but remained indifferent to my coos. Finally he cried two or three times and I led the way to the mouse abode. He rattle-booed once while waiting for me to come out with the mouse. He ate it quickly, showing no disposition to carry it about as a love offering.

12:12 P.M. Everything very peaceful. Rhody now in a baccharis bush on the bank by the fig tree, most comfortably lying on a tangle of horizontal branches: one of his highly favored spots.

No thrasher sounds could be heard anywhere after the incident last reported, until I heard talk at 12:03 at the Clearing. Neo came promptly on invitation. The other would not come, but remained, for the most of the time, in plain sight. They exchanged gurgles, fluting sounds and, occasionally Neo made plaintive sounds suggestive of the green-backed goldfinch. This is characteristic of him. Some of his companion's sounds were like those from his friend of yesterday, and there appears to be little doubt that it was she and that the rumpus of this morning has not separated them. I could not see whether she had lost any feathers.

Rhody remained in his bush until 2:35, then he came down and watched us pruning for 10 or 15 minutes, then started for his old roost, passing out the side gate at 3. The wind had been shifting toward the east in the meantime. I allowed him 20 minutes and then went to see if he was in his house. He was. (Clear, gusty wind veering from north to east. Temp. in Clearing 50°, in court 46°. The thermometer was replaced in the Clearing today. This temperature difference is typical). When I went into the court to read the instrument there a thrasher ran away swiftly--a stranger, I think.

Removing the tape from the PLOVER.

About 1:20 Dr. Reynolds and I caught the plover by allowing him, to run into a landing net . He did not struggle there, nor did he during all the manipulation in removing the tape and the subsequent removal of the adhesive by rubbing with a solvent. He was so docile that R suggested offering him a worm while thus held captive. He accepted it readily. We ventured the prediction that, on release, he would show no more fear than on any other occasion when two persons were in the cage and, as a matter of fact, after going to a water dish to wash his bill, he came right back to us for more worms!

To my surprise, although not to R's, the fracture had completely mended and the flesh had grown over it, so that there was nothing to see except a little patch of bare skin. The tip of the wing, however, drooped 2 to 3 inches, but he is able to lift it up and cross it over his tail with the other one, although it slips off again.

No thrasher song was heard during the afternoon, nor were thrashers seen, but they were heard scripping near the entrance at about sunset.

Jan. 7th. (Sunrise 7:26, sunset 5:06).

Thrasher song was heard nearby at 7:08 A.M. (Partly cloudy).

At 9 A.M. (Cold wind from N.E., intermittent weak sun, temp. in court [illegible], in Clearing 46°, in cage (where the plover now had his

wing in normal position--temporarily) 41°) there were no thrashers to be seen or heard.

Rhody, and the thrashers frozen while waiting for food from me. Cause: A hawk.

At 11 A.M. thrasher full-song was heard. I went to the Clearing. Rhody was sunning on a pile of tree prunings there Neo (the singer) and his friend were on the fence. Without my calling or making significant motions, Rhody came and stationed himself in front of me in receptive attitude; Neo dropped down from the fence and ran toward me, but stopped half way and sat on a branch in the pile of prunings in frozen attitude. I thought it was because he caught sight of Rhody just between us, but Rhody was also frozen. I thought it strange that Rhody should freeze on seeing Neo approach. Neither would budge on being tossed worms. Just as I noticed that Neo's friend was also frozen, Rhody dashed into the bushes and a hawk flashed past my face. Now there was an overhanging oak branch at the level of my face only 6 feet away, and the hawk passed between the branch and me at the level of my eyes. As it retreated, I judged from its small size (especially) that it was a male sharp-shin. None of the birds went far away and in a minute or so the hawk had the audacity to come back for another look, but farther away from my face (40 feet ?).

I got a gun and searched for the intruder without results. On returning to the Clearing I had little trouble in locating the thrashers and road-runner. Rhody was given his mouse and Neo came for his worms, his friend (mate?) watching from about 10 or 12 feet away, mostly in full view. Both talked continuously. I find the mate frequently utters a word that is best represented by secret.

Neo's friend resembles Nova.

To say that this bird looks like Nova is to say that one pea looks like another; nevertheless she seemed to have the same broad superciliary stripe, her irides , when seen in full sun and at the proper angle seemed to flash the bright reddish brown suspected (and recorded perhaps incorrectly) of Nova and, as these notes have shown of Neo's companion at other times, she has a peculiar, high-pitched song. Without attempting to be precise about it, my recollection of both is that it is a quick, nervous song with fewer of the fluting tones of Brownie and other males. As an extremely rough characterization: it has a sort of jigger, jigger, jee effect at times, not yet heard from other thrashers. Maybe it is a female thrasher characteristic, but Greenie, who seems in retrospect to have been an exceptional bird, did not have it. (My impression of Greenie, when she was here, as the notes show, was that she was a young bird "taken in hand" by Brownie, early in her career, and that she had learned her song from him. Even when well in her second nesting cycle here, she still had the juvenal iris color).

Contrast with Greenie

As an offset, however, to the resemblances of Nova and this new bird, there is the matter of tameness. This bird is already far more tolerant of the presence of man than Nova ever was.

At 12:30 P.M. Rhody was at his old post on the west lot and Neo was near him. When I coo-cooed at him and coke-coked he would draw back his head in the initial poition of cooing, but I could hear nothing. Neo, however, ran toward me at once for worms. Once, when I put my hand through the fence he took a worm from it, but he did not like to do it. His mate was nearby in the bushes and they talked.

About 2:30 P.M. brilliant thrasher song sounded from the echo tree. A man (Bettencourt) working in a garden 200 yards from me, down in the valley below, called up to know if that was my bird, remarking what a fine singer it was. I was not sure that it was Neo, but when it left in the direction of the cork elm, I went over there and Neo came to me for worms. Again his mate was with him.

At 3 P.M. I drove past the west lot. Rhody was at his post. I stopped and talked to him from the car, trying to make him sing. My coos brought no results, but my coke-cokes caused him to lower his head and "cry".

Another hawk.

At 3:30 I drove by again. Just as I was passing his tree a Cooper hawk passed within 20 or 30 feet of his house and at the same level. I stopped and searched through the thicket for Rhody, but could not find him.

At 4 he was not in his house and could not be found antwhere.

roosts late.

At 5 he was in the house for the night.(Julio).

eo in full song. Comparison with Brownie's.

At the same time Neo was again in full song in the echo tree. Identified by calling him to the fence for appropriate reward. The song had begun about 10 minutes before. I heard it while in the house and went out to listen. A very fine, sustained song, but not so good as Brownie's best. When Julio came to report on Rhody I asked him if the song was as good as Brownie's. He said: "Na-a-w, Sir! But maybe he will learn better when he gets older." (I wanted an independent judgment). Julio then volunteered the opinion that Neo is a young bird and that he can not "use words" like Brownie. The absence of phrases that permit of approximate syllabication is one of the marked differences between the two birds. The timbre of many of Neo's tones is also inferior to B's. But I have yet to hear two thrashers that sing exactly alike. Thrasher song is not stereotyped. Brownie and Greenie had many identical phrases and I was fooled by them many times, even after I got to know them well.

ctual time of sunrise here.

Jan. 8th. (Sunrise 7:26, sunset 5:07). The actual time of sunrise here was 7:39. At this time ofthe year the sun rises at about the lowest point of the hills to the east. So, as compared with the official figure, it is probable that sunrise is never less, here, than 14 minutes later than the Weather Bureau figures.

Unknown thrasher.

Thrasher song was first heard at 7:05. When I went out at 8:45 it was calm here, but strangely, 250 yards to the east the wind was roaring through the tall eucalyptus trees--a north wind. (Temp. in court [illegible], in clearing [illegible]). An unknown thrasher was at the cage, but soon left for the northeast, whence continuous song now came.

lover

The plover's wing was now up in proper position as it was yesterday morning, only to hang down later for the rest of the day.

At 9:50 A.M. the north wind had now broadened its scope and was tearing over the pines on the north line.

nother(?) thrasher.

Another thrasher was discovered in the glade-sage area: a silent bird, all alone -- not very wild and coming out into the open freely.

hody not seen. eo finds me. N follows me. ats from hand.

Rhody had not been seen this morning so, at 10, I went to his roosting place on the west lot, going over the fence and down through the brush--my "inside route"--by following which I do not have to appear in the open. He was not there, but, as I stood looking up into his tree (No. 13, map p. 1313 A, Book 7, which see in order to follow subsequent events) Neo joined me, talking to his consort, who was 20 feet away digging industriously in the thicket. I gave him worms, then went up through the brush and out into the open space of the west lot, moving slowly. Neo voluntarily followed all the way to the fence, talking. His mate followed him, digging. I went over the fence and sat on the ground inside it near tree 7 at the place X. I handed Neo one worm at a time through the fence, he taking them

His mate leaves.

He calls her loudly.

more readily from my finger tips than from my palm. His mate, unknown to him, had travelled along the ground and disappeared in tree 15 on the south bank. He now became anxious and his contact calls took on a different character--I imagined more plaintive--but he still did not overlook the worms and made no effort to go and find the other bird, who remained silent all this time. After a few minutes I retired about 30 feet, thinking that as he would not now be distracted by my offering worms, and being unaware of his mate's whereabouts, he would now climb a bush and call loudly for her. That is exactly what happened. He sang short, rich phrases and, almost immediately I saw her retrace her course and join him. Song now ceased and talk began again.

Rhody located.

Dogs.

After searching everwhere for Rhody I at last found him (at 11:15) waiting at the fence at this same place, X. He was prompt in coming to the fence and following as far as the orchard; but there he halted in the lee of the bank, not liking to breast the wind as he would have had to do in continuing on to the tool-house. I got a mouse for him and gave it to him by the apricot when he cried for it. I learned from Mrs. Scamell this morning that, in addition to the hawk hazard to which he had been subjected yesterday, dogs raided his domain while he was present, and she had been keeping an eye on the west lot this morning to see if he would appear; but he did not.

Effect of wind turbulence in equalizing temperatures.

At 12:15 P.M., although the prevailing direction of the wind was from the north, there were gusts in all directions: "The wind she blow, east, west, north, south..." Temp. in court [illegible], in Clearing [illegible]. Note the usual difference absent, due to the mixing effect of the variable wind and the probability that its temperature is now close to the above figures.

At this time Rhody resting on his orchard bank.

Extremely loud call by Neo.

Neo shows first evidence of nesting reflex.

I expected to find Neo (why, I do not know) on his favored south bank in the chaparral, and so he was, coming through the fence quickly when I sat down, talking. His mate now called loudly from the bushes perhaps a dozen feet from me. He mounted to the fence and threaded his way in her direction, through the maze of honeysuckle and climbing rose and, when about 8 feet from me, called so loudly that I could feel the physical impact on my ear-drums--a new experience (with a bird) for me. His mate now wormed her way toward him from the opposite direction and Neo dropped down to see me about the worm situation, hanging about my feet. I now had nothing to offer and he went off a few feet and began picking up twigs, one of which he carried up into the bushes on the fence. First nesting reflex noted on his part. It looks like a serious affair between him and What-shall-I-call-her. N2 will do for the present. (Also, later, "[illegible]

Feeding Neo and N2.

Attitude toward each other.

First "blue-bird" call by Neo.

2:15 P.M. I have just finished a 20 minute session with Neo and his mate at the same place. I sat in the chair in the open. Neo came through the fence promptly and took worm after worm from my fingers, retreating less and less after each worm. N2 came through in about 5 minutes, not getting closer than about 10 feet, but taking all the worms that Neo did not get first. Once he stole one from her bill. She had perhaps a dozen. Neo seemed bottomless. He was inclined to chase her when she was successful in getting the worm before he arrived. Yet once he carried two worms in his bill for a minute or two, making the "blue-bird" call that Brownie used in approaching the nest with food. He carried them once almost to N2 as if to feed her, seemed irresolute, came back, looked for another customer, then ate them himself. First "nest approach" and "feeding call" by Neo.

Rhody crouches as sharp-shin comes. At 2:45 Rhody was still resting in his bush on the orchard bank. He crouched as he saw a sharp-shinned hawk approach and pass at his level about 100 feet away.

At 3:15 he was ready for another mouse. He slept in his old house, but was not timed in going there. (Visitors).

Neo and N2 were still in the same place at sunset and Neo was always willing to come through the fence on seeing me approach. N2 looks like a bird larger in every way, but I can not be certain until I have a ggod look at them both at the same time and at the same distance--that illusion stands in the way!

Jan. 9th. (Sunrise 7:26, sunset 5:07).

First thrasher notes were heard at 7 A.M.; first full song at 7:10. By 8:20 thrasher sounds had shifted down to the lower portion of the north slope and three of them (possibly 4) were moving about in a leafless catalpa tree there. (Calm, clear, 47° in court 56° in clearing).

At 10 Rhody had stepped out of his house a foot or two to get the sun.

Returning from an absence at 11, I found the two thrashers waiting for me at their place on the south bank, Neo taking worms from hand and N2 at distance of 8 feet plus. Constant contact conversation between them and Neo trying to get all the worms.

At 11:40 Rhody had moved to the roof of his house to get the sun there. He was not interested in my doings.

At noon I approached the thrasher place quietly and sat down. Nothing could be heard but in less than one minute Neo was hanging around me expectantly and N4 followed part way. Neo took worms from hand freely, in the open.

Hawk amd Rhody again. At 1:20 Rhody was found on the south bank of the Clearing and accepted an invitation to come for a mouse; but when we were about half way to the tool house I noticed that he was no longer following, so I went back and a sharp-shinned hawk flew out of a shrub alongside me and perched 30 feet away on a buckeye limb overhanging the route that R and I had just traversed. Of course I had no gun. I had noticed that Rhody was very careful while following me, scrutinizing his surroundings thoroughly and moving only a few steps at a time and had "assured" him that I would protect him against all hawks and that everything was all right. I could not have made good on this promise! I found him in a few moments and, this time, there was no hitch. He retired to the orchard bank to lie on a little bench I have scooped out for him on the steep slope at a place that he likes.

More nest-building reflex shown by Neo. I now went to see the thrashers, getting instant response. After taking the first worm from my fingers Neo picked up a twig longer than himself and many branched and carried it to the same place where he put the first one reported. He returned for another worm and repeated with a second twig. Once again the worm--twig action occurred, then he went down on the bank. (Clear, variable wind from east to west through north, 60° in court).

Several more times I visited the thrashers during the afternoon, each time both birds responded to the same extent as before. Neo finds it convenient to stay 3 or 4 feet from me, preen, dig and sun where he can detect any movement on my part indicating intention to hand him another worm. A mere gesture of the hand is now enough

to bring him to me. In fact, several times, I wanted to make him go away without frightening him too much, in order to give N2 a better chance to get her share of the worms, and waved a hand at him. This merely brought him closer if he was far enough away.

About 3:45 Julio gave him four centipedes and two of those worm-like salamanders, his capacity seems unlimited.

Rhody remained at the bank until about 3:15, when he decided to go to his old place to roost. He was again very careful and it took about 15 minutes for him to cover the first 30 feet. He then waited in one spot for 15 or 20 minutes closely studying the trees to the north. I thought he gave particular attention to the place from which I had frightened the sharp-shin earlier in the day, but may have imagined it. However, his care was justified, for, again a sharp-shin flashed by and he crouched close to the ground for several minutes not moving. Finally I got a gun and "convoyed" him to his house in the oak, which he reached at 4:08. (Clear, calm, 61° in Clearing, 56° in the court).

Jan. 10th. (Sunrise 7:26, sunset 5:08).

Early thrasher song about as yesterday, but it soon shifted to the N.E. and stayed there an hour or two then ceased.

At 8:50 A.M. (Calm, fair, 54° in court) no thrasher sounds to be heard. No thrashers here as late as 10:30. I then went over to the cork-elm area. Everything was quiet--no birds in sight. Calling brought no response. After about 5 minutes the call of a robin, several times repeated, came from the bushes below me and Neo came out--the robin call ceased. N2 now flew from the opposite direction and perched in the elm, where she was joined by a flicker and a California jay. The two thrashers now talked to each other while Neo came for worms. It was at once noted that his contact calls differed radically from anything used before. His principal themes consisting of three new, easily identifiable phrases: The call of the robin, the pee-yulk (or ti-err) of the jay and the rippling flight song of the meadowlark. These were repeated innumerable times 5 to 15 feet from me. N2 soon came down to get her rations, but at longer range than Neo. N2 defers so to Neo that it is hard to get worms to her. Even when landed as close as 2 or 3 feet from here and she moves to get it, she will stop on seeing Neo rushing toward it from 15 to 20 feet farther away. She does protest mildly, however, when thus thwarted. I left them there about 11.

At 11:20, as I walked rapidly past the sage-patch, a sudden movement at my feet, revealed Rhody, who stopped at once on gaining about 4 feet space between us, satisfied that this distance insured adequate protection. He was mouse-minded and followed to the shop without uttering a sound. He remained on the orchard bank until 3:45, when he left for his old roost. When Julio went down there to verify his presence at about 5 P.M. Neo and mate discovered him and came for food. Up to about that time they had remained off to the N.E.

Jan. 11th. (Sunrise 7:26, sunset 5:09). In a day or two more the sun will begin to rise earlier.

First thrasher song was heard at 7:05, off to the west. Neo and N2 probably roost for the night off there.

wk lies in wait. At 8:50 A.M.(Temp. in court 54°, fair, light N. wind) as I approached the sage-patch to look up the thrashers, a sharp-shinned hawk sat immovably on the driveway watching the bushes. I stopped

about 25 feet from him without disturbing him, although, he was doubtless aware of my presence, stooped and picked up a stone as big as my fist and threw it at him. I had no chance in the world to hit him, even if the throw had been accurate, for he was off before the stone reached him--and he had started only after the stone was actually in the air. At this time the thrashers were heard off to the N.E. They had both come to Julio for worms at the scene of the hawk episode at 7:30 A.M.

Returning from an absence at 12:15, I found Rody on the bank at the orchard. He seemed fearful of his surroundings and determined to remain under cover. Thinking that he should be hungry by this time and that his failure to follow me for a mouse was due to fear of hawks, I went and got him one; but he would not take it for a long time. Finally, when the mouse crawled under him, he killed it and ate it. Shortly after I learned form Julio that he had given Rhody a mouse at 11:15!

Rhody stayed home until time to go to roost. Contrary to his usual habit, he ran part of the way and was in his old house at 4 P.M Julio went down to check up on him, and Neo and mate again discovered him there. (62°).

Jan. 12th. (Sunrise 7:26, sunset 5:10).

First thrasher song was heard at 7:10 A.M. The bird approached from the west, passed by the oval lawn, going east. Doubtless Neo, coming from his night roost.

At 8 A.M. Julio found both birds at their place on the south bank and gave them centipedes and salamanders.

At 8:30, when I went out, they were no longer there, and I heard no thrasher sound anywhere. (Cloudy, calm, 45°).

Having seen nothing of Rhody, I went down to his old roost tree at 11 A.M., finding him sitting on the roof of his house, looking very glum and dissatisfied with everything. He did not brighten up, as he usually does on seeing me, and offered no greeting. This business of sitting on the roof is a rather new phase in his behavior There was no sun, as there was on previous occasions when he has been sitting there, so it was not a question of warmth this time. Perhaps it was to command a wider view as a measure of safety, and freedom to depart in any direction in case of his being attacked, now that the hawks are so bad. He showed no disposition to come down as I left.

At 2:30 he was no longer there and had not been seen in his usual haunts; but, at 3:30 Julio found him again in his house. Rhody cried and came down for a mouse--one of the few instances where he has done this after having, presumably, retired for the day. The sun was now breaking through the clouds and he moved to his old post to sun his back, and was not watched further.

Nothing more had been seen of the thrashers and they were not heard during the day; nor were other thrashers heard. For some time now, the only thrashers known to have been heard are Neo, N2 and Inver.

Jan. 13th. (Sunrise 7:25, sunset 5:11). The first day of the season that the day has lengthened "on both ends."

At 7:02 A.M. the first thrasher song was heard--in the garden.

At 8:45, (Fair, calm, 46°) a thrasher could be heard singing full song to the south, a considerable distance away--first time in weeks. I went out to investigate, thinking it might be Neo in new territory.

It was in the top of a cedar at Wicklands, about 300 yards from this room as the crow flies. As it continued to sing, as I stood about 50 feet from the tree, the echo of the song could be heard distinctly, coming back from my neighbors' houses just across the street from here. The song therefore carried not less than a quarter of a mile.

This bird now moved to a birch at O'Neill's and immediately it was seen to be Broken-wing, father of Okii and Chiisai. It now went to the O'Neill roof and, from there, toward the Sampson place, where O and C were hatched. (First time I have seen this bird in weeks).

Song could now be heard to the N.E., but I did not investigate until 10 A.M., when I went to Inverleith Terrace. Inver was singing in his garden and two other thrashers could be seen--one of them singing--in a sapling in the next lot to Inver's. I suspected these birds to be Neo and N2 (for the first time seen in Inver's territory on the east side of the street). They were about 100 feet from me, but soon one of them sailed down past me to the brush around the cork elm, then ran out to me: Neo. In a few minutes more, N2 came down, but was not interested in me and sat in the elm with back toward me for the next 10 minutes, during which Neo was getting worms from me, but refusing to take them from hand.

At 10:30 I spent 15 or 20 minutes looking for Rhody in every place but the right one, which was on top of the cage, where I could just see his head. Without invitation he came down, cut a few fancy capers about me and through the bushes, then came to the tool-house for his mouse, after one sonorous rattle-boo. He chose now to rest on the bank at the orchard for some hours.

About noon scripping was heard from the echo tree. I went to the fence at a point about 60 yards from it and could see one thrasher in it. Without calling, I waved my hand two or three times. The thrasher dropped into the brush and, in less than a minute, Neo came out for worms. So far this morning he has been considerably less confident in approaching me close enough to eat from hand.

At 3:45, after an absence of several hours, I stopped at Rhody's old roost tree. He was already in his house. J said later that he had given him a salamander a little earlier.

At 4:15 I went to the Clearing to see if Neo and mate were there. There was no sound of birds, but in a few minutes Neo came for worms, taking them from hand, but still shy. His mate kept to the bushes, and they talked. Once, when a worm dropped from my fingers just as Neo was about to take it, he ran away as if frightenby the occurrence. I did not move my hand and he came back at once and bit my fingers, though there was no worm in them. This means something--what I am not certain. (58° in court. 63° in Clearing). No further evidence has been seen of nest-building.

Jan. 14th. (Sunrise 7:25, sunset 5:13).

The usual early thrasher song, followed by J's feeding them with centipedes near the sage patch. (Partly cloudy).

When I went there at 8:50 one of them was present and believed to be N2, as it sat and preened comfortably and would not come out.

After returning from several hours absence, I found Rhody sitting quietly in the orchard watching some golden crowned sparrows, not threatening them, but seeming only interested. (11 A.M., 60° in court, 65° in clearing.

At 1:15 he was still in the same place ; but cried, this time, when I spoke to him and followed for his mouse, returning to the bank. A little before 3 P.M. he decided to make a day of it and headed for his old roost tree, entering his house at 3:19.

A south-east wind had come up during the forenoon, subsided and then been replaced by one from the north-west--180° shift. It then changed to the south-west and clouded up rapidly. It looks as if we were in for a storm. (56° in the court).

One less Sharp-shinned hawk at this place.

At 3:45 Julio reported a sharp-shin had been sitting in the middle of the oval lawn waiting for birds to come to the feeding stations there, and was now sitting in an oak. I took no chances with this fellow and potted him with the 0.410 gauge shot gun. A male, perhaps the one that was sitting so insolently in the road the other morning. I do not believe in indiscriminate shooting of hawks but, as mentioned in these notes before, I intend to have something to say about Nature's balance on my own property. Cooper's and Sharp-shinned hawks have no place here amongst thrashers and road-runners.

Jan. 15th. (Sunrise 7:24, sunset 5:14).

The expected storm brought rain during the night, the morning (and the whole day) being practically cloudless).

Thrasher song was first heard at 7:05 A.M., moving toward the east from the oval lawn, then ceasing for the entire day. Julio fed both thrashers in the orchard at the time singing ceased.

I was absent most of the day. By instructions, Julio offered Rhody meat instead of a mouse and this was accepted eagerly. This one meal was enough and, at 3:40 Rhody began his march toward his old place in the tree on the west lot.

Jan. 16th. (Sunrise 7:24, sunset 5:15).

No early thrasher song heard, but both birds were at their place on the south bank and were fed by Julio about 8 A.M. (Cloudy, with some rain, S.E. wind, 48°).

At 11 A.M. Rhody was not in his house. I called and he came out of the thicket near the roost tree and down on the bank; but was not concerned about food, although I offered him none.

At 12:30 this experience was repeated, except that I went up to him as he sat on the bank and held a piece of meat practically against his nose without interesting him. When I retreated to the sidewalk and showed him the red box in which I carry mice, it was another story and he started down. When I showed him that there was a mouse in it, he came all the way and got it. (S.E. wind, cloudy mild, not raining. Precipitation so far, this storm, negligible).

At 2:45 P.M. I found Rhody tucked away snugly in his old house. How long he had been there I do not know; but as it is a blustery day, one can not but commend his good sense, as there is nothing else for him to do, since he has a nice, warm meal inside containing vitamins A to Z. (50°).

Jan. 17th. (Sunrise 7:24, sunset 5:16).

Rain during the night followed by a partly clouded day, without rain.

Thrasher song was first heard at 7:09 in the garden, but it did not last long--here. However, for a large part of the time up to about 11 A.M. song was heard from the Wickland--O'Neill territory about 250 yards to the south. While this was going on a strange thrasher appeared in the orchard and began to answer the other bird,

leaving for parts unknown in a few minutes. Neo and mate were not seen all day, although I looked for them several times.

Thrasher song was renewed about 3:30--this time off to the south west--and continued for a half hour or more.

Rhody was not in his house at 10 A.M. and could not be located. He was found about 11:30 in tree 15 on the south bank by the clearing (See map p. 1313A). He wanted no food. About noon I approached him with a piece of meat and he cried. I handed it to him and he ate it while on his perch, using considerable care not to drop it, as was perfectly apparent. He did not leave this place until a little after 4 P.M., and then started, very cautiously, toward his old roost. Instead of going there in the open as is his custom, he took a circuitous route along the edge of the thicket, stopping often to look and listen. He reached the ladder tree (about 60 yards from his starting point) in 15 minutes, and used up nearly three-quarters of an hour before making his last leap to the roof tree. On arriving there he did not go at once into the house, but waited 3 minutes, then made one short, quick dash of 3 feet to enter it and, almost instantly was in sleeping posture--tail flattened vertically up against the back wall: 5:02 P.M., a late retirement. (Sun shining brightly, calm, 58°). Ever since 11:30 A.M. his attitude had been one of more or less tension, which, confirmed more or less by the behavior of other birds--including hawks--I attributed to the presence real or suspected, of accipiters. A sharp-shin was here in the morning and, about 3:50, a Cooper's came out of the trees at a point close to the roost-tree. Others had also been seen high over-head. Some of these Rhody had reacted to.

Jan. 18th. (Sunrise 7:23, sunset 5:17).

First thrashers song heard in the garden at almost precisely 7 A.M., lasting for a half hour then stopping. (Partly cloudy, calm, rain threatening).

At 10:10, no thrashers having been seen, scripping was heard to the west. I went to the fence and called. Scripping stopped at once and, in less than a minute, Neo came out of the dense baccharis growth for his worms, almost immediately followed by his more standoffish mate. The sky now suddenly "turned inside-out" and I bolted for shelter, Neo et al doing the same. (50°).

At 12:15 P.M. Julio was delegated to go down and see if Rhody was in his house and needed sustenance. Rhody was and accepted gratefully a piece of Hamburger "as big as two mice" without leaving his house.

At 1:25 rich thrasher song, strongly reminiscent of Brownie's performances, was heard off in the direction of the glade. I approached carefully, thinking it might be a stranger. This bird was using torquita, torkpeelya, torkeeya phrases like Brownie's, but unlike the latter, was repeating some of them as many as five times. He also had a whistling song much like that of the Black-headed grosbeak. The song ceased shortly and a very wet thrasher came out of the sage-patch, ran toward me and took worms from my fingers: Neo, with his broken tail feather, much improved in song quality (of tone) and variety of phraseology. Unlike Brownie, he nips my fingers when taking worms. Neo was followed at respectful distance by, I suppose, N2, judging by their attitude toward each other and me. Both climbed the old oak and both sang full song at the same time. Their relations were friendly, and there is no good reason to doubt that N2 was the second singer, except that it was a performance heretofore not heard from her. Both soon departed and were not traced.

The thrasher singing in the Wickland--O'Neill territory yesterday had this same grosbeak phrase, and at the time, I went over there to see if I could identify the bird. Although I saw him and another one with him for an instant, I could not attract them to me. It seems not improbable that the bird was Neo, singing where Broken-wing was singing on the 13th. The W--O'N territory is only about 100 yards from the Sampson grounds where Broken-wing and mate reared Okii and Chiisai and may be considered a part of the same territory by those birds.

At 2:20 (the rain having stopped at about 12:30) I went down through the inside route to look up Rhody, As I approached the tree he stuck his head out of the house to see what was afoot. There was a crumb of meat on the tip of his bill. While I stood there he picked up and ate small fragments of meat that had dropped in his bunk earlier in the day, disturbing himself as little as possible--a veritable Sybarite, Rhody. (Sun coming out, 48°). If the sun stays out, I shall not be surprised if Rhody comes out to warm his back, although I imagine much depends upon whether he regards it as being early morning or late afternoon!

At 2:50 P.M. Rhody was at his post on the west lot as I drove by. So he did come down. His roosting time was not observed, but Julio says he was not at his roost at 4:30. Neo, as now often happens, discovered Julio at R's tree and wanted worms.

Jan. 19th. (Sunrise 7:23, sunset 5:18).

Rain during the night and early forenoon, clearing for the rest of the day. No early thrasher song heard, but thrashers began to sing to the N.E. and S.W. late in the forenoon. None were seen at this place.

I went to Rhody's roost at 10:15, but he was not there. However, in a minute or so, he came running out of the bushes and jumping over obstacles to reach me, placed himself in front of me, raising and lowering his crest and looking very animated and pretty. I had nothing but worms for him and he caught them eagerly, watching every movement of mine to be sure that none were overlooked. (52°).

At 2:30 when Julio was attending to the mice in the toolhouse, Rhody rattle-booed loudly outside the door and was given meat. (The mouse supply is a little uncertain at present, and we have been giving meat instead. This has aroused no objections on his part). Rhody now retired to rest on the orchard bank; not moving from there until about 4 P.M. when he began his slow trek to the west. By 4:31 he had advanced only 50 feet, so I threw up my hands and quit the job. Julio reports him as going to house at approximately 5 P.M. He wanted no food after having had the meat: not even worms.

Neo again spotted Julio at Rhody's tree and demanded worms.

Jan. 20th. (Sunrise 7:22, sunset 5:19).

Day dawned calm and clear. Very little thrasher song heard, and that distant.

At 9:15 A.M. Rhody was at his post on the west lot sunning. I called to him from the fence and imitated his song. He obliged by singing his cooing song perhaps a dozen times and wanted no food, so I left him.

About 10:15, as I drove west on Selborne Drive, he was on the sidewalk opposite the Scamell house, headed for home. I stopped the car, got out, called and he came to catch a few worms.

However, he was more interested in the car than in food and went to examine it, considering for a time flying up on to its roof, but abandoning the idea. A passing car caused him to retreat into the growth on the south bank, where he climbed a tree and sunned his back.

Dog after Rhody.

Mrs. Scamell now told me that, a short time before, while he was at his post, a dog ran after him; Rhody stumbling "like a human being" as he started to run and being compelled to take flight to escape. Apparently a narrow escape.

Rhody's Cooing Song--an odd phase of it.

The last note of the series of coos is usually lowest in pitch, least in intensity and separated from the prece~~e~~ding notes by an interval longer than those that separate the others. For the first time I noticed this morning that he, several times, seemed to forget this note and raised his head, then seemed to realize that the performance was not quite complete and then lowered his head again and gave this last low coo. I thought also that I detected a faint "grace" note preceding the regular song; but of this am uncertain.

Rhody clearly shows that he is tired of meat and wants a mouse, and remembers where they are.

At 12:55 Rhody was on top of the cage and I offered him meat, but he would not take it; but when I turned away he came down toward me. A second offer of the meat was again refused and he then tore off in one of his ridiculous circuses, winding up at the sage patch. I now went to the drive way and stood near the old oak. Rhody approached me and stopped, rattle-booing loudly twice. The meat was again offered and his reply was to run quickly toward the tool-house and stand waiting at the door--although I had made no move in that direction. He has been given nothing but meat for 3 or 4 days (check interval by back notes) and quite clearly indicated (to my mind) by this behavior that he was tired of meat, wanted me to know it and behaved accordingly. As a reward for his intelligent effort to make his wants known he was given the largest mouse I could find, taking it unhesitatingly from hand. Surely this behavior of his was intelligent.

Shortly after this, scripping was heard off toward Robinson's I went down to the entrance and called. The scripping stopped and, in a minute or two a thrasher made a long flight toward and past me, then came running back. Neo, all alone, rather shy, but expecting worms. I had to toss him a few before he would take them from hand. He stayed with me 10 or 15 minutes, getting more confident all the time; but he was constantly looking into the bushes as if for his mate. When worms were withheld he went to the same spot where he took twigs the other day and began pulling things with his bill. He then came out and started calling loudly. At this time another thrasher was singing full song far to the west (Reported by Julio, who now came and reported it;--It could not be heard from where we were). After 7 minutes of loud calls, Neo changed to "talk" as another bird joined him, coming from nowhere. I went to see if the bird to the west was still singing, thinking that possibly Neo could have heard the song inaudible to us and that the singer was his mate. However, I found the bird still singing.

Rhody, after his meal, had chosen the roof of the cage as his afternoon's basking place, leaving there "about 4 o'clock when the sun got off the roof"--(J). I found him in his old house at 4:20 when I drove by.

Julio reported (4:30 P.M.) that Neo had gone lame and was hopping around on one foot. (The actual report was that Neo was "hoping" and cross-examination elicited the foregoing).

Jan. 21 st.

Thrasher song was first heard here at 7:02 A.M. and there was a lot of song all day coming from various directions. Much of this was due to Neo moving about to sing at different locations near the bounds of what is assumed to be his territory. Thus he sang from the N.E., E., N.W., W., S.W. and perhaps from the south, besides from various stations within the grounds. As he was frequently contacted, it was easy to identify him as the distant singer in many cases. (By watching him come home). As an example: I was near the entrance--about 125 yards due east of the Clearing, and heard much thrasher song due west. I went to the Clearing. Two thrashers were in the top of tree 12, both singing and in amicable relationship. A third thrasher was singing far off in the canyon below. I called to the two birds (about 60 yards away). They were much engrossed in the musical competition, but after a few minutes, dropped to the ground and ran to the fence, where I gave them both worms--Neo and his mate.

During the afternoon both birds were frequently contacted at their place on the south bank and, strangely Neo(who is no longer lame) would not take worms from hand.

He is very selfish in the matter of wanting all the worms and will try to get all tossed to his mate, even fighting her if they arrive at the worm at about the same time.

Rhody was first seen at 9 A.M. in a tree on thesouth bank at the clearing, where he remained for about 3 hours. (56°, clear, calm, precursor of a fine day). About noon he suddenly ran out of the bushes near where I was working in the garden and invited attention. Offers of meat were refused and again he dashed off in circuses with rattle-boos, but when he saw me head toward the tool-house, he was satisfied and trotted after me as meek as a lamb. He seems to know that he has "got my number." This was all he wanted for the day and, at 4:30 P.M., I found him already in his house.

Jan. 22nd. (Sunrise 7:21, sunset 5:21).

A heavy tule fog with dripping trees, lifting about 1 P.M.

The first bird heard was "Xochimilco", the bantam off to the west, at 6:50 A.M. Next was Neo (probably) in the garden at 7:10. Thrasher song continued all morning from various points of the compass.

Rhody was still in his bunk at 12:05 P.M. Here we have an example of what appears to be direct physical response to unfavorable weather conditions. At 1 P.M. he was at his post on the west lot, not disposed to heed my invitation. In a few minutes he went into the thicket and did not reappear. (58°, the fog now replaced by high clouds).

At this time thrasher song came mostly from a southerly direction and I went down to investigate. I found Broken-wing and three other thrashers at the Hershey home, 200 yards (by map) from here and about 200 feet (?) lower. I could interest none of them. There was some chasing going on. A fifth thrasher could he heard in the direction of the Robinsons' and Julio says another was here when I was down there.

Rhody had not appeared inside the fence, so I looked him up, finding him in tree 8. He cried plaintively and stretched his neck as far toward me as he could and I handed him a large piece of meat, which,this time, he was glad to take in lieu of a mouse.

Jan. 23rd. (Sunrise 7:21, sunset 5:22).

Thrasher song began in the garden at 6:55 A.M.--earlier than has been the case recently.

At 8 A.M. both Neo and N2 were accounted for at their haunt near the sage patch. Thrashers were singing down at the Hershey place. (Bright, calm, 44° in court.

At 9:15 A.M. I found Rhody at his post on the west lot. On request he sang his cooing song for me several times. 54° in Clearing.

Another "first" for thrashers. Thrashers were still singing to the south--also to the north. I went to find these, and found Neo singing in the echo tree. On call he stopped in the middle of the song and ran to the fence for worms, followed shortly by N4.2 In his eagerness to miss nothing he, at times, flew up into the air from the ground to catch a worm; the first time, unless I am mistaken, that a thrasher has done this here.

Rhody sings on request. At 9:30 I found Rhody in the orchard, very lively and pert and much interested in my movements. As a reward for his earlier song I led the way to the tool-house and gave him a fine mouse, which he took from hand. While following me he again rattle-booed, as he has been doing recently on similar occasions.

A seasonal "first" for Rhody. (It should have been recorded yesterday that, once when I spoke to him he hruh-hrooed in response--the first time in many weeks).

Rhody now disappeared for an hour or so, then reappeared on top of the cage for a long rest. He wanted no more food from me during the day, and, at 3:40, I found him in his house in the roost tree. Neo, incidentally, discovered me under R's tree and came for worms. While I was engaged with him Rhody came out of the house and perched in his old roosting place in the same tree, over my head. I thought at first this was because he had seen me feeding Neo and wanted to participate; but as he did not respond to offers of worms, his action seemed inspired by other causes. I now observed that a wind had arisen from a direction that left Rhody, while still in the house, more or less exposed to it--it having been impossssible to face the house in such a way as to protect him from all winds. It was also seen that the sun was not shining into the house for the time being. I went away and returned in 20 minutes with meat. He was now back in the house, but at right angles to his regular position, with tail flattened against one of the inclined braces supporting the roof. (See Fig.1, p.1291A). This brought him facing the wind and as he still wanted no food, it is thought that his leaving the house temporarily was caused by the causes suggested.

Neo again presented himself for food on my return. He and his mate had spent most of the day in the bushes just outside the fence near X (Map, 1313A), and on the three or four occasions when I went to the fence (Once with Dr. and Mrs. Reynolds) he had promptly come out for his rations.

Jan. 24th. (Sunrise 7:20, sunset 5:23).

At 9 A.M., thrashers had not been heard singing nearby. (Clear, wind generally from the north but, at lower levels, coming from "all" directions, 45° in court, 54° in Clearing.

Rhody at his post on west lot, after some hesitation, answered me with a half a dozen songs. This attracted an Anna's hummer, who buzzed over him, then perched nearby to watch him--not an uncommon incident.

Thrasher scripping was heard from the fence by the glade and,

as I approached, Neo, without invitation, ran to me . He seemed to come from the same point where he had deposited the twigs the other day, but I can find nothing there resembling a new nest, although there is something that looks like the sodden remains of a very old one.

At 10 A.M. Rhody was sitting in an entirely new place for him in the orchard--in a Pittosporum undulatum. Although I was looking for him, it was only by accident I saw him. He wanted no food.

nother "first"
for Neo.

I passed on to Neo's domain and sat down by the sage-patch, not having heard any sound from him. In a few minutes he came through the fence. This time I was successful in having him jump from the ground and take worms from hand as he was in the air. Another first for him. He now adopted the policy of sitting on the ground 5 or 6 feet from me. doing the standard thrasher "sun-fit", preening, and keeping an eye peeled to detect signs of my "loosening up" with more worms. Occasionally he was rewarded. This lasted for about 15 minutes, I being the first to leave. Once I place a worm on my knee to see if he would have the courage to take it there. He flew up part way, but dared not complete the act.

hody's reaction
o deferred
eeding.

I now turned my attention to Rhody. This bird was wandering about in receptive mood. I teased him a little by pretending to go to the tool-house, but not going all the way, thus arousing his expectations only to disappoint him. This was done to observe his reactions. He rattle-booed several times and went off in 3 or 4 circuses, apparently as a result of this behavior of mine, before I relented and rewarded him with a mouse from hand.

(Rhody and the
cat, Tommy-
Leo. +

At about 1:30 P.M. Rhody was on top of the cage. He became interested in something toward the east and beagn to walk along the roof in that direction--neck stretched forward and keenly inspecting the trees ahead of him. He seemed intensely interested in something and not afraid. He transferred to the trees and continued his progress warily through the branches, then dropped to the ground and continued in the same direction for perhaps 50 feet, then came back part way and sat on a stone, still alert but not apparently greatly concerned. I could see nothing in the trees at first, but finally caught a glimpse of a white, stationary, furry mass partly concealed in the dense foliage about ten feet from the ground. It proved to be Tommy-Leo, the white cat that gave Rhody such a fright and chased him so determinedly a year or so ago. (See notes). I chased him away . A box trap will be set for him and if we catch him, he shall be given a lesson with the garden hose and assorted noises designed to effect a sudden mutation in his future progeny, if any. (Unfortunately, I promised long ago not to hurt him!)

On returning after some hours absence, I found Rhody in his house at 4:20 P.M. (58°) in Clearing.

Jan. 25th. (Sunrise 7:20, sunset 5:24).

At 8:30 A.M. (Bright, wind from north, 48° in court, 54° in Clearing. Minimum during night [illegible]), Neo was not at his place on the bank;* no early thrasher song had been heard.

At this time Rhody was at his post on the west lot and, on repeated "invitations", responded with his cooing song.

*So I thought; but he called loudly and musically when I left so I went back and fed him, finding he had come to meet me.

+ It was not Tommy-Leo!

About 9:30 I went to the sage-patch and sat down. Neo was home and came out to take worms from hand, keeping up a low conversation with his invisible mate. She did not appear at all during the 10 minutes I sat there.

I now went west to look up Rhody, passing a female silver pheasant in the orchard (Dr. R's?). Rhody was in the Clearing--not a usual place for him, unless invited there. He wanted no food and I left him. 15 minutes later he was in the orchard, as I discovered by going to see what two Bewick wrens were so noisy about. He was given a piece of Hamburger, but ate only small scraps from it.

A unique experience with Rhody, Neo et al.

About 10:20 I heard Rhody start his coo-song in the orchard, finding him sitting in a bush on the bank between the apricot and the fig. I stood about 7 feet from him, watched and listened closely. He was not at all embarrassed by my presence and sang 20 or 30 times during the approximately three-quarters of an hour I remained there.

R's song.

I have described this song several times; but there are some phases of it which I may not have touched upon before. (I'm not goin to look up back notes!). He sings with his bill closed. Sometimes there is a slight nasal overtone on one or more of the coos; but usually the sounds are sweet and plaintive. Sometimes there is a little grace-note at the beginning. On the present occasion his utterance varied between 5 and 7 coos. As noted before, once or twice he "forgot" the usual detached, lower, last note.

Neo comes.

I had been standing there only two or three minutes before Neo came out of the bushes to join the party, talking to his still invisible mate. He came to me for worms, not bothered by Rhody. That bird, after one glance down at the thrasher, ignored him thereafter, continuing his song.

N2 comes out.

Neo's mate now chose to show herself. I tried to get worms to her, but the greedy Neo is too agile and has too long a radius of action, so N2 generally lost and finally went off about 10 yards to dig.

Bushtits and plain titmouses visit R.

A pair of plain titmice now landed in Rhody's bush about four feet behind him and scolded. He turned his head to look at them, but did nothing about it, continuing his song.

Other birds nearby.

Other birds nearby were: Quail, golden-crowned, song- and Nuttall (or Gambel sparrows), an Anna's hummer doing his power-dive and whistle over his mate, brown and spotted towhees. For some reason or other the ubiquitous wrentits did not come, nor did the wrens return.

A thrasher-road-runner duet at close range.

Neo continued to hang around me like a persistent fly and had just taken a worm from my fingers when an outburst of thrasher song from the Sampson territory 250 yards to the south caused him to dash up into the apple tree at my back, where he broke into instant full-song within 6 feet of my ears. He kept this up for over five minutes, Rhody contributing his part. I was now standing between a road-runner and a thrasher, each in full song and neither over 7 feet from me. This is the unique experience referred to in the marginal note.

Neo's song causes N2 to come back and sing too.

The effect of Neo's song upon N4 was almost instantaneous. She ran and flew to the pine tree just behind Rhody and perched about 15 feet beyond him and sang full song, using, I thought, some of Neo's phrases.

Hermit thrush comes.

At the same time a hermit thrush ran to the pine and added its "chucking" call.

For a time I had two thrashers, a road-runner and a Nuttall sparrow singing at the same time and quail, spotted towhees and a hermit thrush uttering their calls, all nearby.

At about 11:10 Neo's mate headed for the west. Neo promptly followed and thrasher song gradually faded away.

Rhody difficult to find.

Rhody, almost simultaneously, flew to the base of the pine. I gave him a minute or two "head-start" and then spent 17 minutes looking for him in the immediate surroundings of the tree, "finding" him only when he sailed out of the pine, in which I had thought I had overlooked nothing, skirmished about a bit and then rattle-booed sonorously when he saw me head for the tool house. When I came out carrying a live mouse by the tail, he was standing in the door waiting for me whining--this time with raised head--so I could almost look down into his gizzard! The mouse was quickly put out of commission, but after it was swallowed whole, the bird's neck and breast feathers fluttered for a few seconds in response to the last kicks of the mouse.

He now retired to the orchard to rest and, when I left for the afternoon at 2:40, was still there.

Neo eats Hamburger steak.

While I was away Julio made the discovery that Neo will eat Hamburger steak--something Brownie would never do.

Jan. 26th. (Sunrise 7:19, sunset 5:25).

No early thrasher song heard nearby, but at 8:45, Neo squeezed through the fence from his loafing place on the bank for worms. (Clear, slight N. wind, 52° in court).

Rhody was not at his post.

sings without urging.

First seasonal wing-clap of Rhody.

Neo and mate come.

At 9:45 Rhody was at his post on the west lot and began to sing when he saw me, without inducement from me. Soon he came over the fence and followed to the orchard and stopped. I went to get meat and mouse. He sang while I was away and ran toward me when I returned, clapping his wings over his back: the first time he has been seen to make this gesture this season. He would not take the meat, so walked past me, did a short circus stunt, and went to the sage patch, where I joined him. He was again offered the meat between songs, but refused it. Neo now came and stationed himself a couple of yards away. N2 now followed and sat in the little redwood 5 yards away, watching events.

Neo feints at Rhody.

I showed Rhody the red box in which the mouse was concealed. He brightened up at once and came forward. He swallowed the mouse and then, for some reason, disgorged it, examined it and again swallowed it in a few minutes. Neo was watching all this, seemed critical of Rhody, made one short dash at him, thought better of it and came back to stand where he could watch me. Rhody started momentarily then paid no further attention to Neo.

Peculiarity of N2's bill.

I now fed the thrashers, who had been waiting patiently, Neo again getting nearly everything. I switched the fare to Hamburger. Neo seemed as eager for this as for worms. N2 also took it, but Neo interfered repeatedly even to the extent of dropping his own meat in order to get pieces tossed to her. It was noticed that N4's upper and lower mandibles do not have the same radius of curvature, the upper being on shorter radius so that the bill closes at the tip only and daylight may be seen along the entire line of separation.

At last, and for the first time, I succeeded in filling Neo up to the "gills", thanks to the Hamburger.

Rhody now came back to sing on the path two yards from me, the htrashers remaining. R now considered going up into the tree overhead where he had built Nest No.? but went to the cage instead, thence to the acacia against its east wall, where he was scolded by wrentits and Bewick wrens. I then left to write this note, the two thrashers still watching me from the margin of the sage patch.

Rhody elected to stay home until about 4 P.M., doing the usual thing, which is: nothing.

Neo and N2 could be found at their place on the south bank at almost any time during the day. Neo's growing habit of sticking close to me when I sit down is giving his mate a better chance to get her share of the food and she is showing increasing confidence.

A road-runner on Skyline Blvd.

About 1 P.M. I went up to the new extension they are building on the Skyline Boulevard to see if I could catch sight of a road-runner in that territory, Dr. Reynolds having reported seeing one there some weeks ago. At a point 1.6 miles from where the road turns off into Redwood Canyon a road-runner crossed in front of the car, stopped about 25 yards away when I called and stopped the car. He seemed to listen respectfully when I coke-coked and coo-cooed, but evidently he could not understand my foreign accent as Rhody does, fo he would not reply! He went on about his business and a few minutes later, about 400 yards farther along the road I saw another one (or perhaps the same one) foraging and getting results. He also refused to respond to my conversational efforts.

On my return here about 3 P.M. Rhody and the thrashers were quickly located. (62° in court, 68° in Clearing. Almond trees in full bloom in the Leona Heights district).

Jan. 27th.

There was little early thrasher song nearby and Neo and N2 were not seen here at all during the whole day.

The morning was overcast and chilly; but the afternoon was sunny and warm.

There was much distant thrasher song, principally to the south. I went down to investigate and found Brokenwing, all alone, singing in a patch of willows in the lot behind the Hershey house. This seems to be his present singing post and he sings almost continuously nearly all day.

At one time three thrashers could be distinguished in song in the canyon to the west.

Rhody was not at his post at 8:30; but was at 9:30. Instead of singing for me, he dropped to the street, inspected two cars and hurried on ahead of me to the orchard. He as given meat there.

He is temporarily enamoured of the same bush by the apricot and perched there for several hours, singing but rarely. (Perhaps four times). On one of my visits to him he cried (whined) for food and was given a mouse.

He went to his ladder tree at 4:10 P.M. (60° in court) but was so slow about moving on to his house that I got disgusted and left him.

Jan. 28th. (Sunrise 7:17, sunset 5:27).

Some rain fell during the night and the forenoon was cloudy with occasional light showers.

No thrasher song was heard at this place during the forenoon and Neo and N2 were not locatable. However, Brokenwing sang persistently from his territory.

Rhody was not to be found anyplace either up to 2 P.M.

At noon loud thrasher song was heard toward the glade. I went there, the song ceased and Neo came running along the path to me to get food, approaching from the rear--my first intimation of his approach being the sound of his running feet. When I stopped the worm supply he went down on the bank and sang continuous under-song as he slowly wandered about. 5 or 10 minutes of this and he climbed up into

the honeysuckle on the fence, faced me at 10 feet distance and sang full song until I left about 12:20. He would occasionally come down for worms, then resume his former place and sing some more. At no time was there any sign of his mate, and there was no talk addressed to another bird; further, when in full song, he did not look off into the distance as if looking for N2. It was noticed that, usually, before launching into a major effort, he "practiced" a few seconds in low tones--like a musician lightly running over his score before the curtain rises.

It was also noted that he used his "vic'-to-ree" phrase several times.

At 1:10 P.M. I went back, hearing him singing softly as I was on my way there. On arriving at my destination he broke into loud song again, then came down for hamburger.

I now left him and started west to look up Rhody. I had gone about 100 feet parallel to the fence along the orchard path, when loud song broke out a few feet from me on the fence, to my left. Neo, whom I had already forgotten, had followed me. A wave of my hand, and he came down for worms, returning to the fence to sing sub-song. I now went all the way down to Rhody's night roost (without finding him) and returned along the orchard path, hearing Neo still singing sub-song while I was still perhaps a hundred feet from him. I could hear "torquita" phrases. When I arrived opposite him and stopped, he broke into full song. When I threw a cigarette away, he took the act as an invitation to come and have some worms, so was rewarded. (I have had him start for me instantly on his seeing me reach for my watch!) He went back to the honeysuckle to sing more sub-song and to preen when I left. Nothing had been seen of his mate, there was no talk as if she were nearby and he did not seem concerned by her failure to be present.

This appeared to be his day"at home", for he could be heard here almost any time up to 3:30, at which time he was given centipedes, and I went to see if I could find Rhody.

Rhody was at his post on the west lot and quite pleased to be found, for he rattle-booed loudly, flew to the top of the fence and was given a huge piece of Hamburger. He was very hungry and I suspected that hawks had kept him in concealment. After wiping his bill almost continuously for 5 minutes he returned to his post. A sharp-shin spiralled down from high above, went up again, then disappeared to the east, Rhody watching him. In a few minutes a red-tail sailed low over Rhody's bush (20 feet up). (3:55). At 4:01 Rhody started for the ladder tree about 50 feet away and I returned to the house to get the car (as a movable observation post). R was not in his house at 4:11, so I went up to the lot to investigate. I found him 15 feet from the ladder-tree in a little trail he has worn through the brush, but facing away from the tree, semi-frozen; as if he had been frightened, had reversed his course suddenly and then remained motionless. I stood beside him. Without moving his body he turned his head slowly in all directions looking at everything but me, and reacting to all sounds--except those made by me. He was clearly frightened--but not of me. (As a digression: He was confirming innumerable observations which I have made on him, his youngsters and the whole local thrasher tribe, which have --every one of them--shown that, when one has once gained their confidence even partially, wild birds, in moments of real or suspected danger from an invisible enemy, do not apparently include the human being present amongst their enemies. I wish I could say that they seem to derive a sense of security from his presence under such circumstances but, I think, as a rule they do not, although these notes have recorded a few instances where there have been exceptions to this rule, in my judgment).

At 4:21 Rhody jumped up to a baccharis branch two feet from the ground and resumed his wary pose. I left and returned at 4:36, finding him exactly as he was when I left. At 4:45 he dropped down to the trail, walked with extreme care along it 10 feet toward the ladder-tree. Another period of watchfulness followed, with occasional glances up into the tree and preliminary crouchings as if to fly up. At 5:02 he did go up, then:

5:09, first move on route to his house,
5:09½, second,
5:13½, third,
5:13¾, fourth,
5:18, fifth,
5:20 , sixth,
5:21, seventh, and last, to the roost tree, followed

by entering the house. I had seen no hawks since the red-tail, but his actions indicated some sort of a fright had been received.

At 6:30 the mystery was perhaps solved when Julio told me that, when I left to get the car a "hawk came back and sat on the fence where Rhody was wiping his bill and I nearly hit him with a rock."

Jan. 29th.

There was rain last night, but the day dawned sunny and cloudless and remained so.

There was early thrasher song here, but not much. Brokenwing sang loudly in his territory until about 11 A.M.; thereafter little was heard from him.

Neo was not seen here until 10:30, when he announced his arrival with full song. His mate was with him and, at any time during the day up to 5 P.M. (and perhaps later) he could be found at or within 40 feet of his preserve on the south bank. Although he responded freely to all invitations to come and get worms and meat, he was distinctly averse to taking food from hand, in fact would not do it. His mate was somewhat tamer than usual, coming much closer than heretofore. She does not care much for hamburger, but likes to eat softfood from the dish. She still looks like the larger bird and, I judge, older and more sophisticated. There was no song by Neo after 10:30 A.M.

Rhody was first seen at his post on the west lot at about 9:3 A.M., sang repeatedly when urged and thereafter, a few times on his own initiative. At 1 P.M. he had taken up a strategical position in the garden where he could not fail to observe my movements if I came out of the house and was eager for a "hand-out", rattle-booing on seeing me, quite satisfied with the large piece of meat which he took from my fingers. After this, until 4:30 P.M., he "rested" in the orchard, then started for his night roost, observing infinite precaution against attack, as it seemed. He did not make his first jump to the ladder tree until a little after 5 o'clock (actually at 1 minute and 48 seconds after 5. I timed him accurately because I suspected that he was going to repeat yesterday's time very closely, and it will be seen that there was only a difference of a few seconds Probably a purely accidental circumstance).

Jan. 30th.

There was early thrasher song to the east, south and west and but momentary song near the house. At 9:30 A.M., partly cloudy, south-east wind, 50°.

At 10:30 A.M. Rhody was still in his house and looked down at me benignantly, but did not cry or show intention of coming down.

Thrashers were singing far to the west in the canyon. About 11 O'clock, I thought I recognized the grosbeak-like phrase that Neo sometimes uses, and a little nearer, so I called at the west fence and Neo came out of the chaparral for worms. Loud song was heard just behind him and his mate stepped out of the bushes. Neo had another broken tail feather hanging down and "blue" spots in his plumage at various points. I suspect that he has been having competition for the favor of N2 and that it has not been all smooth sailing. He was still shy and nervous. This change during the last few days may be due to increasing realization that the world is full of enemies. The fact that N2 is not always with him suggests that she may then be with another male who has temporarily attained dominance and that rivalry has led to fighting for her favor.

oadrunner and thrasher
ctivities from 11:50
to 2:15.

At 11:50 Rhody was sitting, all puffed up and looking rather sour, on top of his house in the roost tree. One downward glance at me and he was satisfied that there was no good reason why he should come down.

Thrasher song and talk could be heard directly north of his tree, so I went to investigate, finding Neo in a small oak in the dense baccharis thicket about 100 feet north of Rhody. Talk ceased and song now sounded west of Neo, across the street, farther down the canyon, perhaps 50 yards away. Neo addressed himself to that bird with song and talk. I now invited him to come for worms and he came shyly, not approaching closer than three feet. I now went back to see what Rhody was doing. He was not there, so I turned back to Neo, who was now gleaning at the spot where I had fed him, and Rhody came running to me from the same spot. He had managed to get there withou my seeing or hearing him. He was bright and friendly and I gave him worms. Thrasher song of high quality now sounded apparently from Rhody's tree where I had just been, and no song was heard from across the street. Neo now climbed the small oak in the baccharis thicket and addressed song and talk toward the roost tree. The singer there was not inferior to Neo in quality of tone, but the song was entirely different from N's, being more "rolling" in character.

I now returned to the house to get a fresh supply of worms so that I could continue to observe the two thrashers and their reaction toward each other; also to get meat for Rhody.

On returning I was just in time to see the bird from Rhody's tree join Neo and both birds now began to dig and forage in close company in perfect amity. Neo and N2, with little doubt. Rhody had disappeared. N2(?) flew back to the place from which she had come and Neo shortly followed. On going to the roost tree, I heard them talking and Neo came out for Hamburger, still shy.

A short, unsuccessful search for Rhody, and I returned to the thrashers. They were now digging happily near the ladder tree and I left them at 12:30, and made another search for Rhody in the lee of the ridge, as that was where he would most probably be found under prevailing wind conditions, provided he had not followed me home for more food. I found his fresh morning's droppings about where they "ought" to be, and that was all.

At 1:30 I took up my rounds again. Neo and mate were now at their old place on the south bank near the entrance: somewhat to my surprise, as it was fully exposed to the S.E. wind. Neo came for meat. He was still there at 2 P.M. as I passed on my second lap aroun the periphery of the property.

I felt certain that Rhody would be found out of the wind, and that meant to the north or the north west. At 2:10 I found him sitting in a bush outside the fence at the north-west corner. I had previously passed there half a dozen times and called. He was not very hungry but condescended to come and take a big piece of Hamburger from my fingers and gulp it neatly, making no comment either before or after. There have been several hawks flying low over the trees today, and that is probably one reason for Rhody's being so hard to find.

At 3:30 Neo was still at his "home" (I hope it is) place on the south bank. I could neither see nor hear him, but when I talked he answered with soft twitters. He was up in the honeysuckle and would not come down, yet despite his recent shyness, when I reached in through the tangle he threaded his way through it confidingly and took worms, a centipede and a wormlike salamander from my fingers. (Completely cloudy, blustery sou'easter, 50° in court, hawks still present). At 5 P.M. he again responded to call for food from the same place in the honeysuckle.

Rhody's roosting time was not noted, but, at 5:30, Julio found him in his house. He said that Rhody had something that looked like feathers sticking to his bill.

Jan. 31st. (Sunrise 7:15, sunset 5:31).

It began to rain sometime before midnight last night and was still raining when daylight came.
No early thrasher song heard.

Rain ceased to fall about 11:30. I found Neo where I last saw him, ready for worms. Only the top of his head and his tail looked wet.
Meanwhile Julio found Rhody still in his house--not hungry, and with no feathers on his bill.

At 12:15 P.M. Rhody was not in his house, but came quickly out of the bushes somewhere on call, dry, clean and lively. He was glad to have meat.

The sun broke through the clouds while I was with Rhody and Brokenwing sounded off from his territory to the south and, on my way back here, Neo was heard singing loudly in the orchard. I found him in a peach tree apparently inspired by Brokenwing's announcements down below. Neo continued to sing a loud, "imperative" song for several minutes, then dropped down to the ground and began to dig furiously under the fig tree, abandoning this work to come and get Hamburger from me. After eating he resumed his full song.

Rhody retires
before
1:30 P.M.

At 1:30 Rhody was found back in his house, having as later visits proved, given up all hope of there being agreeable road-runner weather during the rest of the afternoon, although it was not raining at the time. Soon it began to rain again and kept it up, thus justifying his forecast of events.

Little more was heard from the thrashers during the day, though Neo was contacted at his home place twice again and Brokenwing occasionally called.

February 1st. (Sunrise 7:14, sunset 5:32).

Heavy rain last night . Early thrasher song not heard.

At 9 A.M. Neo was not home, but there was singing off to the north-east and down in Brokenwing's territory. (Rainy).
9:30 still not home; no song from N.E., but BW singing as before.
10:00. Patches of sunlight in the distance; both sun and rain here. S.E. wind.
10:50. After a heavy shower the sky became a vast dome of blue in a surprisingly short time. Neo not at home. I went to the north-west corner of the place, not having heard anything from that direction, called without raising my voice. Neo answered from the thicket and came out for food. I came back to get worms and meat; on returning, found he had left. My guess was that he had followed me part way and that I would find him at his old place, after I had looked up Rhody.

I now started down the "inside passage" to look for that bird thinking that the sun would have lured him from his house. I was surprised to hear his full song ahead of me in the thicket, and found him in the middle of my path. I crouched 4 feet from him and offered meat. His response was to sing again--at this close range! He was perfectly dry. (As Neo had been). He continued to sing and I could catch every nuance. The sound is throaty and rich; but faint nasal overtones can be detected at times. It began to rain and his song ceased. He now advanced to take the meat from hand, as if realizing, now, that the weather was t~~h~~reacherous and that he should take food while it was available. I could now observe his bare skin-patch back of his eye to advantage, at arm's length.(As I have on several hundred other occasions). I have always suspected that the colors vary in hue, shade, intensity and area to some extent, not only as between individuals of the species, but in any one individual, depending upon degree of maturity, adult age, state of the emotions, stage of the mating cycle(and annual cycle-- or time of year) and so forth. Without discussing this matter in detail, the following changes are noted in Rhody: (Compare p. 1061, Sept.16,1935)

The purple at the upper rear quadrant of the eye now extends farther to the rear. (This has been noticed for a long time)
The blue bands are wider, especially at the rear.
The white area is more definitely triangular.
The scarlet (or orange) area is now two-toned; the upper and rear portion being deeper in hue than the lower and forward portion. It is as though the latter had faded.

The general impression, for some time, has been that the blue is brighter and more distinct, but that the red is duller.

There were several hard showers during the afternoon, some almost torrential in intensity, and it was thought that Rhody would seek refuge in his house early; but he was not there at 1 P.M., nor at 2:40; however, Julio saw him enter his house at about 4:10. He refused meat, and was not very wet.

Neo and mate, despite the weather, spent much of the time at their home area on the bank. Julio stuffed Neo with meat there and this gave N2 a chance to get worms.

Feb. 2nd. (Sunrise 7:13, sunset 5:33).

The weather continued stormy with strong S.E. winds and rain during the night and , in the morning, there was no change.

No thrasher song was heard up to 11 A.M. and Neo was not seen at his home place on one earlier visit there.

At 11 A.M. Julio went down to look up Rhody. Despite the weather, he was not in his house; but when J called, Rhody answered with his full cooing song from the thicket north of his roost and kept it up in J's presence. He did not want meat, so J came back to get a mouse for him, with results not yet known to me (at 11:10).

It will be seen that we have, yesterday and today, two examples of his leaving his house in stormy weather and, moreover, singing in the storm, the latter behavior being, I believe, the first instance noted here. At any rate, I do not recall any other. It will be seen also that, yesterday, the storm did not affect his roosting time apparently-- in sharp contrast to the day before.

11:30 A.M. Rhody is sitting in the rain (deliberately) in a bush just outside the north-west corner, where he is out of the wind. When Julio approached him with the mouse, Rhody performed one of his circuses, took the mouse and, when J left, had resumed song.

Apparently the stimulus which causes him to sing under such adverse meteorological conditions has been strong the last two days: more powerful than the urge to seek shelter. When I went down to see him just now, instead of looking miserable as he usually does in the rain, he was surveying the country below him off to the north-west with every evidence of interest, but no longer singing.

At 3 P.M. he had moved south parallel to the fence about 40 feet and was sitting in a low bush under a tree, still out of the wind. It was not raining. He looked fairly dry. I coke-coked, puck-pucked, coo-cooed, rattle-booed, whined and hrooed, practically exhausting my imitation road-runner vocabulary and while he was willing to listen to me politely, all I could get out of him for several minutes was one soft hroo. I stayed with him--except for such periods as I lost sight of him, until 4:15 P.M. Most of this time he was sitting quietly on the ground at various places "looking and listening". At 3:30 a Cooper's hawk glided through the trees close to the ground and perched in an oak 6 feet from the ground, 40 feet from Rhody. Rhosy crouched at once, remaining thus until the hawk left several minutes later, then he straightened up and stared in the direction the hawk had taken for perhaps 5 minutes. Now followed a slow drift in the general direction of his night roost with 5 to 10 minutes intervals of sitting perfectly still. He wanted no food of any kind, not even when it was held so close that he had to "look cross-eyed"at it. For a bird that is unafraid of one, it is amazing how easy it is to lose sight of him in the thick brush when he may be no more than 3 or 4 feet away. He is absolute noiseless, and blends in with "anything".

During this period of watching there were occasional light showers, but he did not seem to mind them. There was further vocalization beyond that mentioned in thepreceding paragraph.

At 4:12 he made the final leap to his roost tree and house. I watched him a few minutes longer. His timing was good, for he was scarcely settled before heavy rain set in. (52°).

Neo not seen all day.

Nothing was seen of Neo and mate all day and nothing was heard from them, as far as known, but Brokenwing, presumably, was heard at times in his territory.

Feb. 3rd. (Sunrise 7:13, sunset 5:35).

Heavy rain during the night. A little early thrasher song heard in the garden.

hody again disregards weather.

About 9:30 Rhody's full song was heard, gradually coming nearer and nearer the house. In about 30 minutes it ceased and I went out to look him up, finding him home but not concerned about food. Here again, the impulse that constrains him to sing prevailed over his will to remain under cover in bad weather. (Or perhaps he thought it was going to clear up! Anyway the sun did come out in a few minutes and he took advantage of it at once). He was fairly dry, although his tail was rather disreputable.

I now went out to get a mouse supply. On returning at 12:15 (heavy rain and hail in the meantime) he was found outside the north fence under a pine tree and was given a mouse, after he cried for it.

Neo home again.

At 1:35, as I approached Neo's haunt on the south bank, I heard a cheerful little under-song and Neo, looking curiously streaky, came out for his worms. He might easily have been mistaken for some sort of thrush.

I now left, to return about 5 P.M. Neo was singing full song, having kept it up ever since I left (according to Julio). J had found Rhody already in his house when he looked him up at 4:30.

Feb. 4th. (Sunrise 7:12, sunset 5:36).

Rain during the night. Alternating rain and sunshine this forenoon.

A little early thrasher song in the garden. Neo and mate were fed Hamburger by Julio, about 7 A.M., at their place near the entrance. By ten o'clock they had gone and no thrasher sounds were to be heard anywhere--not even from Brokenwing.

At 11:05 A.M. Rhody had not been seen or heard (46°) so I went to his roost tree by the inside passage. He was not there; but as I retraced my route, I found him waiting beside the path. He greeted me with a soft hroo and whines, and was rewarded with a mouse a little later. I teased him mildly by dangling the mouse out of his reach and he responded by rattling his beak very softly with a "rubbery" sound audible perhaps no more than 6 or 8 feet away. He was dry.

A White-tailed Kite.

In the afternoon I went out to the flat country where Wildcat and San Pablo creeks meander through an area of "truck" gardens toward the bay, to look for the kite which Dr. Reynolds saw there a week or so ago. (This bird is now classed as rare). In a very short time I saw a kite sitting on a power line. It flew when I was about 100 yards away, as I approached in the car. I followed in the car, but it returned to its original perch. I drove back and stopped about 50 yards from it without alarming it, and watched it through the glasses. It occasionally flew off a short distance to hover over the fields at various points: sometimes as long as several (?) minutes at one spot, with legs hanging down. When it descended for closer view or to catch its prey, it maintained its body in horizontal position with wings raised more or less vertically. It returned several times to the same look-out point on the wire and preened. Other birds also on the wire nearby were

apparently not afraid of it. The weather was windy with alternate intervals of brilliant sun and squalls of rain. For several minutes I viewed the kite against the background of a vivid, double rainbow. Altogether I watched the bird for about three-quarters of an hour. There can be no doubt of its identity. It gradually worked off to the north-west alternately flying and hovering in search of food.

On returning home I passed Rhody's house at 4:30, finding him already retired, and Neo not to be found.

Feb. 5th. (Sunrise 7:11, sunset 5:37).

"April weather" continued, no early song heard.

Neo home, confiding and singing at unusually close range.

At 11 A.M. I found Neo singing full song in the honeysuckle tangle on the fence in his "home" domain. He came down and got two worms, then went back to his singing. I approached and offered him worms, which he took eagerly from hand, sitting in the vine and eating first from my palm, then from the worm-box direct. He then sang full song 2 feet from my finger tips, keeping it up as long as I stayed and continuing after I left. Mate not seen.

Rhody sings in his house.

At 11:30 Julio went down to see Rhody, who began to sing his cooing song as J approached. He came down quickly to get his mouse, then resumed song as J left.

At about 12:30 Neo had moved along the fence about 100 feet and was now engaged in song contest with Brokenwing 200 yards away. When it began to rain again he kept up for a few minutes longer and then subsided. His mate was not seen, but a thrasher was heard, at this time, singing softly from their regular hang-out.

2:30 P.M. Neo singing in the rain. 10 minutes ago it looked as if it would never rain again; now it looks as if the sun would never shine again.

Rhody was not in his house at 2 P.M. and not visible.
Not there at 4 P.M., but soon came out of the brush to catch a few worms. 50°
He went to bed at 5 P.M. (Julio).

Neo spent most of the day singing in the honeysuckle. I believe he would like to nest there if he could get his mate to see the light.

Feb. 6th. (Sunrise 7:10, sunset 5:38).

A new storm approaching, according to the Weather Bureau, overlapping the present one.

Early thrasher song off to the N.E., believed by Neo.

A White-throated Sparrow. m Feb 5

While I was having breakfast this morning 12 different kinds of birds ate from the feeding station just outside the window. Once there were 9 kinds there at the same time. Amongst them there was one White-~~crowned~~ throated sparrow easily distinguished from the other Zonotrichias by his large and sharply defined throat patch and rich chestnut coloration of back and wings. (He was also here yesterday with the same group--only the second time seen here in 10 years). He was observed at 6 feet distance. The birds (30 to 50 at the same time) were:

Concentration of birds at a feeding station.

Song Sparrows,	several,	Brown Towhee,	several,
Nuttall "	many,	Spotted "	one,
Gambel "	" ,	Quail	several,
Golden Crowned Sparrows,	many,	Juncos	many,
White Throated Sparrow,	one,	Linnets	a pair,
English Sparrows,	a few.	Silver Pheasant,	one.

This unusual concentration of birds at this time and place is believed to be due largely to the heavy snows at higher altitudes as a result of the present storm. (Snow on level at Soda Springs 158 inches--U.S. Weather Bureau).

Thrasher song sounded from the N.E. until about 10:30, when it was heard from Neo's home place. I went there, reached into the honeysuckle and he ate worms and Hamburger from my palm. When food was withheld he retreated two or three feet and resumed song alternating with talk and fussing with the stalks of the honeysuckle. N2 was present and came out to eat soft-food from the dish. A worm tossed to her was gobbled by a towhee and caused Neo to break off in the middle of a song and come out to a point where he could observe affairs better. I offered no more food and he settled himself comfortably on the branch, puffed out his feathers so that they enveloped his feet and the branch, making him look as if he had been neatly skewered crosswise. He was prepared to stay as long as I and kept up a stream of soft talk with his mate while keeping an eye on me. As a matter of fact, he stayed longer, as other affairs called me elsewhere. An hour later he was still at home. (52°).

At 11:50 I went down to see Rhody. He was not in his house, but soon came out of the bushes with that bright, expectant look of his when he is hungry. He said nothing but came quickly to take the offered meat from my fingers. It was raining a little, but he was dry.

At 4 P.M. he was still not in his house, but in a few minutes he came poking through the brush to see what I had to offer, and was given a mouse. He did not go to his house until 5 P.M. (Julio).

Neo remained in and about his nook on the south bank most of the time during the daylight hours. (A day of alternating sunshine and shadow, with negligible rain).

Feb. 7th.

12:25 P.M. So far this has been a day like yesterday as to weather.

Rhody in a high state of "exaltation"

Action during two hour period.

At 9:15 A.M. Rhody was heard singing nearby, west of the house and was found in the branches of the hollow oak below the wall. When I talked to him he clapped his wing loudly over (or upon--it is uncertain) his back and sailed down to the N.W. corner where he marched about with more wing-clappings and song. He wanted no food and was in a state of high "exaltation", singing at the rate of 2 to 4 songs per minute for the next two hours; marching about from place to place with frequent wing-clappings climbing trees and sailing down from them--each time announcing his intention to take off by clapping his wings. He also frequently came to me as if desiring food, but stopped 5 or 6 feet away to sing or slap his wings, or both. He certainly was wound up and keenly attentive to all sounds and moving objects near or far. All of this was taking place on the north side of the house, sometimes on one side of the fence and sometimes on the other. At 11 o'clock, thinking that he probably had reached a stage in his cycle where he might

be ready to carry a mouse about as a love-token, I succeeded in getting him to calm down enough (using the red mouse-box as a lure) to accept a mouse. The creature was killed and he wagged his tail sideways (the first time for the cycle), sang twice with it in his bill (another seasonal "first"), considered taking it up into the tree, walked about with it for half a minute uncertainly, but finally ate it. He was just on the threshold of full courting behavior.

At 11:15 he climbed the pine tree just outside the fence opposite the kitchen door for the third time and, as I heard Neo scripping off to the east, I went to investigate.

eo looking
or N2?

While I was engaged with Rhody, Neo had been singing loudly off to the N.E., frequently using the grosbeak-like whistling phrase characteristic of him. I found him in the sage patch by the glade, ready for food, but rather absent minded and not wanting much. He seemed concerned with matters off to the north and finally headed in that direction on foot, passing through the fence; coming back, again leaving and, ~~finally~~, heard singing full song in the distance. The evidence pointed to his having lost contact with N2 and being desirous of finding her.

hody renews his
tivities.

When I went back to the place where Rhody had been, he was not seen or heard; but about noon, he reappeared and renewed his singing and wing-slapping. At 1 o'clock it was still "on the boards". There was now a period of silence, but when I went out again, Rhody was on the fence, slapped his wings again when I spoke to him; sailed down and stalked off with tail spread and wings open and held horizontally. Singing now was resumed, but with less frequency. He had calmed down to the point where, at 1:30, preening thoroughly became the order of the day.

Rhody retires, but
hungry.

By 4:30 he was in his house, but cried and came down for meat when Julio appeared on the scene. (54°).

eo reunited with
N4.

At this same time I was feeding Neo Hamburger at his home place on the bank. He was given worms from the box about an hour before while he was sitting in the honeysuckle and appeared to have remained close by ever since he returned from the north about 1 P.M. At that time his mate was with him, so he had been successful in his quest.

hite-throated
sparrow still
here.

The white-throated sparrow is still here and is now (4:45) at the feeding station outside the window where he has been almost constantly since he was first seen there.

Feb. 8th. (Sunrise 7:09, sunset 5:40).

A little early thrasher song off to the N.E. (Cloudy at sunrise time).

Neo and mate were home for a short time during the forenoon and he sang a little. In the afternoon they were not accounted for.

At 9:30 Rhody was not in his house. (Cloudy, S.E. wind, 55°). He was neither seen nor heard during the forenoon, although frequently looked for. After his yesterday's display of exhibitionism I had anticipated a continuance here and it may be that he was staging his act elsewhere. If so, it must have been far away.

As I drove past the west lot a little after 12 o'clock, I saw him sunning his back some distance from the street on the west lot. He did not see me apparently. I stopped and called. He instantly responded by looking in various directions to see whence the call came. I now coo-cooed and koke-koked, being careful to keep well

out of sight in the car. He appeared unable to locate me, although he walked about quite evidently looking for me, and I drove on. So, like human beings, and like Brownie in the matter of locating his young from their calls(as recorded herein) Rhody is not infallible in determining from what direction proceed sounds such as are produced by his own tribe--although it must be admitted that, in the present instance, the sounds were inexact reproductions.

R's "polite" taking of food significant?

A few minutes later I called him from the fence, using the same sounds. He could see me now and, furthermore, he is used to being called from that direction. He now responded (as he had not just before) by lowering his head and singing. When he was "good and ready" he came and took a large piece of Hamburger from hand. Now it was noted that, for the first time in many months, he repeated the "polite" behavior first observed when he was brooding his young and had already given them enough food (See notes of the time). That is, he reached forward took hold of the meat very gently and waited for me to let go before withdrawing with it in his bill.

There may be some special significance in the recurrence of this behavior at this time, now that his mating impulses are coming to the fore.

He wanted no more food from me for the rest of the day. About 4:30 he was found at the ladder tree. He was tense and watchful, but accepting me as ~~a~~ something that could be safely ignored. All the way up through the tree he took great care to assure himself that there was nothing hostile in the line of his advance. At 4:42 he leaped to the roost tree, but even there, 3 feet from his house, h did not relax. It was 6 minutes more before he entered. I had seen no hawks, but thought I heard two horned owls calling antiphonally in the canyon below. But of that I am uncertain. However, these birds are here at night, at present.

Feb. 9th. (Sunrise 7:08, sunset 5:41).

Heavy rain during the night; blustery with strong S.E. winds during the forenoon, with occasional showers.

At about 8 o'clock a little thrasher song was heard from the direction of Neo's home loafing place, but at 9 o'clock he could not be found there.

At 9:45 Rhody was not in his house, but soon came trotting happily down the trail through the brush that I had just traversed and claimed his mouse. He still was not over the threshold. There was no ritual of any kind and the mouse was devoted to strictly utilitarian purposes. After staying with me a few minutes companionably he trotted off up the trail again and disappeared in the thicket. There was no intention on his part to sing; so after waiting a few minutes, I koke-koked and he responded with song. It was then seen that he was standing at the verge of the bank below, looking off to the west. (55° in court, 55° in Clearing. Wind of gale force, cloudy. As the sun is obscured, the equality of temperatures exemplifies the effect of turbulence in causing uniformity of temperatures).

1:30 P.M. This is, I believe, the strongest wind during the nearly 11 years I have been at this place. The power service has, also for the first time in that period, failed. 2 P.M. Power still off, wind shifting more toward the west; sun appearing intermittently.

wind not quite so strong. The leaded-glass French windows are buckling in and out perhaps a quarter of an inch in a width of 3 feet. The yard is covered with a litter of leaves, twigs and a few pine branches an inch or more in diameter. Several trees are leaning precariously and one iron-wood is down. There will be alot of damage today.

Power came on again about 4 P.M. At 4:20 Dr. Grinnell and party arrived. Wind not bad, but few birds around.

Rhody was already in his bunk at this time (Julio) crying for sustenance, and came down to get his meat from J. (We did not go down to see him).

Nothing seen or heard of Neo all day.

Feb. 10th. (Sunrise 7:07, sunset 5:42).

The storm. Heavy rain during the night, which is when most of it occurs as a rule. Papers devoting pages to the effects of the storm.

Local wind velocities reported as follows:

Mt. Tamalpais,	100 miles per hour.
S.F. Airport	78
Farallon Islands,	75
Oleum,	30
Point Reyes	60
Bay Bridge	55
Santa Cruz	75
Point Lobos	55
Oakland Airport	68

(This latter is perhaps the fairest measure of probable wind velocity here, as there is nothing between here and there to obstruct a wind coming from that direction, as it was--approximately--at the height of the blow.

A little early thrasher song was heard to the N.E.

At 9:30 I looked up Rhody.(48°) He was not in his house, but soon appeared, bright and dry and placed himself in front of me, rattling his beak softly in response to my remarks. I had nothing to give him but worms. These he caught with great skill, retrieving quickly all of my bad shots. I went to get him meat and found he had shifted to the N.W. corner of this place, being guided by his song, which he began when he heard me calling.

Thrasher song could be heard from Brokenwing's territory and while I was talking to Rhody, Neo sounded off 250 (?) yards to the N.E. The song approached. When it was about 25 (?) yards away in the baccharis on the north slope, I called and Neo came out for Hamburger and worms. He was shy. His mate soon appeared in the echo tree nearby, but would not come nearer. Rhody had stopped singing when I turned my back on him and attended to Neo; but when I turned to him, came cheerfully for his rations. (Heavily clouded, little wind; we are in for more rain and will probably break another "record" for the number of successive days on which rain has fallen!)

11 A.M. Rain beginning to fall heavily.

At 1:30, just after a torrential rain, I went to Neo's retreat on the south bank and found him there, looking very wet and meek. He was no longer shy as I thrust my hand into the foliage near him. He met me more than half way to take worms from my palm.

Neo calls me?

Although he had been silent before, he called in loud, musival phrases when I left. Thinking this might be a call for more worms, I went back and gave him more. Again I walked away, and again he called loudly and I went back and gave him more worms. I now stood and waited. He called again once and I left without offering worms. He remained silent, except for low talk presumably to his mate, although I did not see her.

I now went down to see if Rhody had sought shelter in his house, but he had not.

About 2:30 I drove past Rhody's roost tree. He was now sitting on the bank below it. In a half hour, I passed again. He was sunning himself half way up the roost tree--a rare place for him. I spoke to him but he did not respond. About 3 o'clock I parked the car about 100 feet from the roost tree, got out, approached the tree and exhibited the red box. He sailed down to meet me on the sidewalk immediately, ate the mouse, then went up the bank. I went back and sat in the car to watch him. He now came down the bank and out into the street as if to come to the car, but a passing auto caused him to retreat, and I drove away. I had gained the impression that he really had wanted another mouse, so on my return home a half hour later I resolved to test this interpretation of his behavior. Accordingly I went down the "inside passage" with a mouse in the red box. R was not to be seen. Calling produced no results. Finally I spotted him in a new tree,for him, and called. No response, other than to look at me. I now showed the red box. He began to fidget, dropped down, pushed through the thicket and came for his mouse. No ritual--he ate it at once.

It will be seen that, during the past few days, with increasing song there has been a decreasing tendency for him to allow weather conditions to influence his movements.

Feb. 11th. (7:06 sunrise, Sunset 5:43).

Rain all night and r aining incessantly this morning still. (11 A.M.). This is the 16th. successive day on which rain has fallen; according to the papers, breaking all-time records, the previous one established in February 1936, itself an all-time record.

Neo, rain soaked, sings full-song.

At 10 A.M. (raining heavily and steadily) I went out to find Neo, who had not been heard. There was neither sight nor sound of him at his usual "home" resort. But, in about 5 minutes, he was heard to call loudly from there as I was raking leaves out of the drains nearby. I went to his place and called; soon he came out, the wettest looking thrasher I have ever seen. He was given a lot of worms and he then retired to the thick growth to resume his song. At 11 A.M. he was still at it. We have here an example of "singing in the rain" par excellence. He was so wet that his skin could be seen through his feathers at places, particularly about the neck. His mate was not seen.

At 11:35 he was found in the orchard and came for meat and worms. Another thrasher, thought to be his mate (as he talked to her) was in the pine near the fig tree. He and this bird sang responsively. Song of more than one thrasher was coming from Brokenwing's domain.

While I was entertaining the thrashers I sent Julio down to look up Rhody. Although it was still raining Rhody was out on the lot. (Again illustrating his present diregard of the elements). He would take neither meat nor mouse, and tore off in one of his circuses through the bushes. This seemed a good time to see if it made any difference to him who offered food, so I went down into the brush

and called for a minute or two without apparent result, until looking behind me, I was mildly startled to see Rhody about six feet from me patiently awaiting the turn of events. I had not heard a sound. When Rhody is dry, as he was, and everything around him is wet and sodden, he no longer blends into his surroundings, but if in fairly good light, he looms up like Kipling's"banana in a coal-scuttle." I offered him meat, but he was not interested. I offered a smaller piece--no result. I showed him the red box--he cried. I took off the cover. He advanced at once and neatly extracted the mouse, downing it greedily and with no thought of using it as a love token.

While this test proves nothing, there was some reason why the bird took the mouse from me and why, instead of taking it from Julio a few minutes earlier, he went off in a circus.

There was now a fine lot of thrasher song: from BW's territory and from Neo and N2(?) in the orchard. I went back there and Neo was singing loudly at the fence, facing BW's location (250 yards away with two or three house in between) and the supposed N2 was stil singing from the pine, higher and a dozen yards to his rear. (Raining).

During the afternoon the rain gradually lessened, eventually ceasing entirely. Neo remained accessible, singing often, though wet

Rhody was in his house at 3:30 and was given a mouse by Julio while there, but, instead of staying, came down. At 5 he was already in his house when Julio looked for him and had apparently just entered, as he was not settled. His tail was still outside.

Feb. 12th. (Sunrise 7:05, sunset 5:44).

Rain during the night; alternating sun and shadow up to the present time (5 P.M.). Papers full of the storm news: Flood conditions in the interior, etc., etc.

Some early thrasher song to the N.E. Neo home most of the day, but not heard singing here. At times his mate, although unseen, was apparently with him.

At 9:25 A.M. I started for Rhody's night roost, but his cooing song sounded, once only, behind me. I went back 40 yards and found I had passed him without seeing him; but he had evidently seen me and, based on the fact that he had not been heard to sing earlier and did not again sing for a half hour, it would appear that this one effort was intended to attract my attention, especially as he came quickly to me for a mouse. (44). No ritual.

About noon I found him sitting quietly part way down the high bank at the top of which his roost tree grows. Although he is in plain sight of all passers by, he has recently taken a liking to this place, and nobody seems to see him. When he heard me coming through the brush, he looked up, rattled his bill softly several times, raised his crest and displayed his colors, rattle-booed once, then came and stood beside me eating meal worms from my palm with the utmost composure, much as Brownie used to do.

At 4 P.M. I went down the inside path again to his tree, purposely not calling. He was not there, but soon came trotting along the route I had just followed and took from my fingers the largest piece of meat I have ever given him. He then sunned his back at my feet, blocking my return path. Half a dozen times I moved closer and each time he retreated a foot or two and immediately resumed his"open-bowl" sunning pose, looking up at me inquiringly. He insisted on blocking my route and refused to get out of the path, so to

avoid any appearance of pursuing him and weakening his confidence in me, I found another way out and left him in command of the field! (50°).

Weather.

There is nothing to indicate that there is to be any change in the weather conditions for some time.

Feb. 13th. (Sunrise 7:03, sunset 5:46). Note the sudden, apparent increase of 4 minutes in the length of the day since yesterday. Presumably the reporter is getting rid of some accumulated fractions of minutes.

Rain again during the night and, in the morning it was seen that the sou'easter had come back again. Now is the time for the man in the street to say:" The climate is changing............"

Speculation regarding Neo's intentions as to this area.

A little early song (in the rain) in the direction of Neo's home area. He was not there (or did not respond to call) at 9:30. This area is exposed to the full force of southerly winds and it is perhaps significant that, despite the extremely unfavorable conditions which have prevailed there during the past 17 or 18 days, he has persisted in remaining there a great part of the time during daylight hours, notwithstanding the fact that he is fully acquainted with much more sheltered spots close at hand. His being fed there more often than at other places, no doubt, has something to do with his preferences, but he had already selected that place before we became acquainted. It was also a place much liked by Brownie and he built three nests there and Neo himself (as the notes show) has indulged in nest-building preliminaries there, and frequently summons his absent mate(?) to join him there. Consequently it would appear that it is regarded as a suitable nest location; so if he succeeds in holding his mate and if the "unusual" weather conditions do not cause him to seek elsewhere, the continuity of thrasher nesting within the property lines may be restored, despite Brownie's demise.

From about noon until near sunset (or as often as I looked him up) Neo was at his home place, responding to invitations to come and have worms and meat, and occasionally singing.

Rhody, disregarding weather as he is doing at present, was singing about 9:30 A.M., near the north fence and was given a mouse by Julio. During the afternoon the storm increased in intensity, the sou'easter gathering renewed strength. I found Rhody in his house at 3:30. He had not been there on earlier visits.

A deviation in R's acceptance of food while in his house.

At 4:20 I placed a piece of meat on the edge of the nest he built in his house last year and he ate small pieces off of it and then, to my surprise, he took the whole piece in his bill and sailed down to the street with it. Why he did not eat it in his house as usual, is not clear. Unfortunately I did not follow up to see what ultimate disposition he made of it--raining too hard-- but the thought occurred to me at the time that he did not want the meat and that he was scavenging the nest. This thought recurred more strongly when, at 5:30, Julio reported that he had given Rhody a mouse in his house at 5 P.M. and it had been promptly eaten; consequently I went down and made a search all about the place where Rhody had landed with the meat just before, but could find nothing. (But see last paragraph of next page).

Feb. 14th. (Sunrise 7:02, sunset 5:47).

There were squalls during the night, accompanied by heavy rain.

About 7 A.M. Neo(?) was singing full song close to the house on the west: an area which he has been neglecting the past few days.

At 9 A.M. I found him at his home place. He popped back and forth through his opening in the fence a dozen times, but would not come farther from it than a few inches. He was talking all the time and in his retreatswent no further than a few inches from the hole--new behavior for him. It seemed that his object was to avoid losing touch with something down on the bank: presumably his unseen mate. When I left he did come through and gather up the food left for him. He had just broken another tail feather.

Meanwhile Rhody, encouraged perhaps by the increasing brightness of the south-eastern sky, was singing by the north fence, beginning at about 8:30 A.M. and keeping it up until 10 A.M., when he was then 20 feet up in the pine near the N.W. corner of the house. All this time he had wanted no food. It now began to rain drearily. For one hour he maintained his place in the tree, seeking no shelter and watching intently the area below him to the N.W., N. and N.E.

At 11 rain stopped abruptly just as I went out to see him and he sailed down from the tree, but did not come to me. Instead he flew over the fence and immediately assumed the "open-bowl" sunning pose, although he was not in the sun, but could see it elsewhere Perhaps that sight of sunlight below to the north was the "trigger" that touched off this action. He did not appear very wet. There was no stringiness of feathers--except as to tail--and the back feathers exposed when he assumed sunning posture looked absolutely dry, which they doubtless were. It was noted that, although the sun was not striking him, he was correctly oriented with respect to it. Further, he appeared aware that there was something not just right about the performance, as he kept glancing back over his shoulder at the sky. Naturally he was getting no heat from the sun on his back, seemed to realize it and appeared to seek the cause.

At 11:30 thrasher song came from the N.E. I went to Neo's home place; he was not there. I now called to the distant bird from the north fence. The only response I got was one song from the invisible Rhody, who had been quiet since 10 A.M.; so I looked him up, finding him at last in another pine a few yards from the first one. Fro now until 1 P.M. he sang at intervals from that pine or from the ground near it, refusing all offers of meat and, when talked to, responding by rattling his beak, rattle-booing or, less often, singing.

First full ritual
of the sea-
son by R.

At 1:10 (Thrasher song still to the N.E.) Rhody finally came and stood 6 feet in front of me, but did not want the meat. I surrendered and showed him the red box with a live mouse in it. He came at once and extracted the animal, killed it and, for the first time in the present cycle, honored it with full ritual: bowing low, hrooing softly, wagging his tail energetically sideways and walking about looking for "customers". After 5 minutes he ate it.

While Rhody was still in the midst of his rites, a thrasher appeared, mounted a baccharis 35 feet from me and began full song directed toward the N.E. whence similar song still proceeded. From its indifference to offers of food I thought the nearer bird was not Neo, but finally it responded to a tossed piece of Hamburger (which it could see better than the worms previously tossed) and it was Neo.

Well, Rhody did
"scavenge"
the meat,

At 3:15 I had another look for the meat that Rhody carried away from the nest last night, as I still had a "hunch" that his act was one of cleaning the nest: a not improbable occurrence considering that, with the seasonal heightening of his mating urge, his "cerebral vortex" is doubtless a whirl of impulses associated with nests, mates, brood, etc. Anyway, I found the meat

At about 4:30 three callers (Miss. Anderson and sisters) came es~~p~~pecially to see Rhody. I got them to park in their car by the west lot, then went in search of that animal. I thought it was a hopeless job, but Rhody came out to his post on call, down the bank to me at the car and took his mouse there. He carried the mouse away, performed a little ritual and disappeared. My reputation was saved.

At 4:58 he jumped to his firat position in the ladder-tree. At 5:22 he jumped to the roost tree. At 5:24 he settled in his bunk. No wind and no rain. Perhaps the storm is over.

Feb. 15th. (Sunrise 7:01, sunset 5:48).

No rain apparently during the night and the morning showed alternating sun and light cloud.

hody's new mating
rcle rapidly devel-
ping its pattern.

At about 8:30 A.M. Rhody's song was being heard frequently at the north side of the house. It moved from place to place and, at 9:30, he was singing from a shrub between the apricot and the fig. He wanted no food from me. He was intent upon less mundane affairs. In a few minutes he began to wander from point to point again, climbing trees which would give him outlooks to various points of the compass, using rattle-boos almost to the exclusion of his coo-song. Several times he came to me as if seeking food, but each time he passed close with scarcely audible coot, coot, coots. and passed on to some other place suiting the fancy of the moment. I was not always able to keep in touch with him, so rapid and wide were his excursions, and sometimes lost him for several minutes. For the most part, however, he kept within the property lines; one exception being when I found him in the street in front of the Scamells'. (From there he was chased home by the McCulloughs' fox-terrier). I now lost him until he sailed down from the eucalyptus clump in which he recently roosted for a time.

He now headed for the cage (which he has been neglecting) and, on the way, picked up a leafy twig and presented it at the mirror. (First time in many months). I went to him, talked to him there, then walked toward the tool-house followed closely by him, and gave him a mouse. (11:40 A.M., calm, hazy, 50°).

Now followed the complete unfolding (for the first time this season) of his looking--for--a--mate--with--a--mouse pattern.

The mouse was received with profound bows, hroos and violent tail-waggings. He then headed for the cage, bowing, etc, to "everything" en route. He went into the cage entry, repeated his ritual there; next to the mirror for 10 minutes of devotions. Now followed 5 minutes standing perfectly quietly back to the mirror "thinking". It was as if he were at a loss as to his further course. Sooner or later, I felt certain, the mouse would have to be presented at the Scamell dining-room windows, so when I lost him for a few minutes, I went down there. Tommy-Leo, the white cat, only ten feet from Rhody, was sneaking up on him on the opposite side of a thick bush and the bird seemed unaware of his presence. The cat bolted on seeing me. (Rhody is now so ingenuous in his relations with fellow creatures -- for which I suppose I am to blame, that I fear he will, some day, offer a mouse to that cat).

Now followed a march along the street until he came to the edge of the McCullough dog-zone. I went along to protect him. The dogs charged him and R hurried home. In just 55 minutes from his receiving the mouse, he was again paying his respects to the mirror, then at various from at the wire. I could not see that the plover was observed by him; but it may have been. At 12:40, for the first time, since this observation began, he was seen to sun his back. He had

been too intent upon higher affairs to regard his personal comfort. As far as known, also, he had not eaten.

I now left for lunch. At 1:15 he was glimpsed, without the mouse, near his post on the west lot, headed for the roost tree. I went down there. He was at one of his stations in the tree. I waited to see if he would go to his house to rest after all this expenditure of nervous energy, but it soon developed that that formed no part of his present plans, for he moved about the tree off his regular route, hrooing softly, looking and listening and occasionally pulling at twigs.

When he came down he began to pick up twigs, look up into trees and drop the twigs. He soon "remembered" his old nest in tree 8 (Map 1313A) went up into it and examined its interior closely in a very animated way. He came part way down and began to break off small branches 4 or 5 feet from my hand, then sailed out into the open with it, dropped it and fell to sunning his back. (1:35 P.M.). I then left, and made no further effort to keep track of him.

At 3:20, while I was listening to Neo singing overhead in a pine tree, a loud rattle-boo close to me gave me a start. Rhody was home again and demanding attention, so I moved toward the tool-house, knowing what he wanted, but he beat me there and was waiting for me. This mouse also received full honors, but was eaten in 20 minutes. Rhody now sat in the same bush where he was this morning until 4:10, when he left for the west lot, dusting at his usual place just outside the gate.

Neo was home most of the day and sang much. His mate was with him only part of the time. About 10 A.M. when I was feeding him she surprised me by running to me for worms from a distance of 50 feet and entirely in the open, taking worm after worm at about 6 feet from me. This was the tamest she has been to date.

Feb. 16th.

For some reason or other Rhody did not sing at all today. At 9:10 A.M. he was on top of the Scamell house and would make no response whatever to any of my best efforts. An hour later he was still there as I drove by.

About 11:30, during my absence, he came home, refused meat offered by Julio and insisted upon having a mouse, which he treated with full honors and carried about; but he did not sing.

Rhody considers building nest in eucalyptus house.

At 1:10 I saw him coming down from the eucalyptus tree where he roosted temporarily and began to fuss with twigs only to abandon them. I could see that he had placed at least one twig in the house, so it may be that he will build a nest there. I gave him a small piece of meat. I was absent until about 4 P.M.

At 4:20 I looked up Rhody, finding him part way up the ladder tree on his way to his house. As soon as he saw me, he cried. (He was going to bed hungry). He came down at once and was given a mouse, which he ate without display, resuming his upward journey through the tree almost immediately. ([illegible]° in clearing, [illegible]° in court, clear, calm).

The storm, which brought rain on 19 consecutive days, was the longest since records were started in San Francisco.

Neo and N2 were home most of the day, singing little and showing no nest-building reactions.

Feb. 17th.

starts nest in house in eucalyptus tree.

10:00 A.M. (Clear, calm). No song heard from Rhody up to now; but, at 9:15 he was busily engaged in carrying twigs up to the house in the eucalyptus and placing them carefully inside! He wanted no food. So he is off again.

Previous to this, at 8:25, both Neo and N2 were fed liberally at their home place. Both like soft-food, but only Neo, at present, is really fond of Hamburger. There has been no full song this morning.

At 10:30 Rhody was no longer working and I turned my attentio to the thrashers again.

2,in absence of eo, has a good feed. induce Neo return.

This time it was N2 that came for worms first, reversing the usual procedure. Neo was evidently away and I thought I could hear him off to the east. His absence made it possible for me to give N2 a good feed and advance somewhat in her good graces. I now went to look up the bird to the east, as he could now be heard plainly. When I left N2 she climbed a tree and began scripping, presumably to call Neo. I located the other thrasher about 50 yards east of the east fence. Calling vocally made no apparent impression on him, but when I whistled Brownie's "purple-one-two-three" call, he flew toward me at once. I now le~~a~~d the way toward the still scripping N2, fed Neo there; he began talking; N2 stopped scripping and I left them together.

Rhody was now discovered lurking near the tool-house and he followed promptly for a mouse, which he received gratefully with bows, hroos and tail-waggings. He then started on his rounds with it: To the cage, to the mirror, to the Scamell window. As I drove down the street at 11:30 he rushed across in front of the car to the west lot, still carrying the mouse.

, though hungry, eady to etire.

As I drove by the west lot at about 4 P.M. Rhody happened to be there. I spoke to him through the window and could see him lower his head and cry, but he was too far away to be heard. Apparently he had been prepared to go to bed hungry again, so I came home, got meat and mouse, went to the Clearing, called and he came running; flew over the fence and was perfectly satisfied with the meat; after a significant glance at the red box containing the invisible mouse and one rattle-boo. As a test, I now offered him the mouse; but Rhody is not greedy and was not now interested in it.(Cloudy).

not greedy.

works on nest(?) in tree 8.

I think he must have worked again on the nest in tree 8 as it seems to be larger and better shaped. If so, this will be the third year that it has had his attention. (Or rather, since he has already inspected it this year--the third year that he has added to it). I am not certain whether he has done any more work on the new nest in the eucalyptus house since this morning.

Feb. 18th. (Sunrise 6:58, sunset 5:51).

A new storm with rain and strong S.E. wind began last night late. (This will probably establish some other "record").

hite-throated sparrow still here.

The white-throated sparrow (9:20 AM.) is feeding outside the window. He has been seen every day since he was first observed. Only one has been seen at a time.

At 9:30, despite the rain, Rhody was not in his house, nor had he been heard singing.

At 11:30 Julio was met by him on the "inside passage" and gave him meat. At 4:30 he still was not home and could not be found.

It was not until 5 o'clock that he was found in his house. Julio then "handed" him a mouse on the pole, which he took, but flew down with it, abandoned and then went back to the house at 5:10. Julio now placed the mouse in the house and Rhody, as if despairing of getting rid of it, finally ate it. (This action, witnessed by Julio only, parallels more or less that witnessed by me on the 13th.).

He was not heard to sing during the day, nor was any nest-building in evidence. He was, in fact, "scarce" during the day.

Neo was not heard to sing at all, but was contacted several times at his home place, sometines with his mate. There was little thrasher song anywhere.

Feb. 19th. (Sunrise 6:57, sunset 5:52).

The night was clear and the morning sunny. There was much thrasher song from various directions.

At 8:20 I looked up Neo. He was home and hungry and talked to his mate (unseen).

Rhody resumes work on nest in eucalyptus house.

When I left him, a soft hroo was heard near and Rhody picked up a large twig and hurried to his house in the eucalyptus tree.

At 9 A.M. he was still working busily carrying up twigs, arranging them inside and crying. I watched him for 15 minutes. Many of the twigs used were pulled out of the ground by him. About half were rejected. It was impossible to discern the basis of his selections.

During this period Neo was singing loudy nearby, apparently stimulated by the vociferous performance in Brokenwing's area.

At 9:45, while I was watching Rhody working on his nest, Neo came running along the path from his opening through the fence, followed by the more timid N2. I gave him meat and, when he had had enough for the time being, he ran back again, passing his mate with meat still in his bill. This gave me an opportunity to make further progress with N2, who was given worms.

11:25. Rhody is rattle-booing on top of the observatory; another "first" for the new cycle. He has been working almost continuously on his nest, stopping now and then for a short rest, either in the nest itself, or to sun his back near me, or to flirt with the magpies in the cage. For a short time he sang on being stimulated by various imitations of mine and then went back to work, often, on being talked to, whining in the nest with his plaintive two-toned call. He was frequently offered meat, but would not take it, and showed no disposition to follow to the tool-house for a mouse. He has done a little wing-slapping and cut a few capers.

Neo, for about an hour, has been calling loudly from one of the oaks at the glade, and almost continuously, using musical phrases. (Calm, occasional clouds over the sun, 56°). Later he retired to the west lot to call and sing.

After leaving the roost Rhody spent more time working on his nest, then adjourned to the roof of the cage to rest, sun and make feints at the magpies. He still wanted no food. (12 M.).

At 1 P.M. he was taking it easy in his nest, but (as noted on many previous similar occasions) began to fuss with the structure and cry on seeing me. He would not come down and follow to the tool-house. This time, his cry was so faint that I could not hear it at about 18 feet distance.

At 1:15 Rhody came down for more twigs and I showed him meat without effect. He gathered a billful of small stuff and was about to go up to the nest, when I showed him the red box. He dropped the load, came to me and began to sun his back. I took the cover off of the box. This was enough; he took the mouse with full honors and began the rounds. The cage, mirror and perhaps the cage occupants, received his full attention for 30 minutes (except when he watched a red-tailed hawk, far up in the sky, being attacked by some smaller bird). He was marching around the garden when I left at 2 P.M. to see what Neo was doing in the west lot.

Neo had been singing there for a long time, and I found him in tree 8. He continued his song for a few minutes more and then, without invitation, glided down to the fence where I stood, and was given worms. He now withdrew about 8 feet and continued his full song from the ground . The first time for him and a relatively rare performance for the California thrasher. He now came for another worm and withdrew to 6 feet distance and continued song, followed by a few seconds of concentrated listening, flight to a bush 20 feet away; song there for perhaps 5 minutes, then return to me for a worm from my fingers. This behavior now became a standard pattern, lasting until I left: To me for a worm from hand; retreat to 5 or 6 feet; full song there for a minute or two; a few seconds listening in almost frozen attitude; withdrawal to the bush for further song. While I was there this happened four times.

At 5 feet distance I could see into his mouth from the side as he sang. The tongue is drawn far back, pressed against the lower mandible, with tip raised. It appears to have no part in modulating the sound. At this distance the sound is so too intense for best effect. Neo's song is extremely varied (when he wants it to be) but as yet, he is not so good a singer as Brownie--making due allowance for personal bias. (64° in clearing, 56° in court).

I now went back and found Rhody sitting quietly in his nest. While he cried on seeing me, his conscience appeared to be easy, sinc he did not bluff at having been working all the time. I do not know whether he dedicated this new structure with the mouse or not.

After recording the foregoing, I went out (3 P.M.) to see if Rhody was still on the job. He was lying down in his nest in the new house. He has quite a rampart built up on its porch also. He cried, did not bluff at nest-building, but reached out and pulled at leaves of the tree. Saving face, I suppose. He continued to work until nearly 4 o'clock, but his resting periods became more frequent and, toward the end, instead of carrying up new twigs, used some of those in his "rampart". At 4 o'clock he came down to sun for 15 minutes near me, wanting neither mouse nor meat; but when Julio came and tossed him a salamander, he took it, killed it (frequently wiping the slime off of his bill) and ate it. The killing was a long job, as the creatures are tough. Now followed a visit to the cage, a glance at the mirror, long sunning, return to the bank above the orchard and at 5:10, passage throught the side gate. At 5:27 he made his leap to the roost tree and was stowed away in his old house half a minute later. I had thought that there was a possibility of his using the new house and nest.

In the meantime I had made several visits to the glade to verify the continued presence of Neo and mate in the brush about tree 8. Although he had stopped singing at about 3:30, he came out each time for food. I fed him again as I left to time Rhody's roosting, and he broke into full song, which lasted for 12 minutes. From where I was (at Rhody's tree) it sounded as if N2 were adding a phrase here and there at certain definite points of Neo's song.

On my return here I noted N2 and Neo working their way throug the brush eastward on the south bank, talking.

Feb. 20th. (Sunrise 6:56, sunset 5:53).

Thrasher song. No early thrasher song heard in the garden, but there was
song to the south and north east.

Checking Rhody's At 7:20 A.M. (Clear, calm, 46°), I thought to check up on
rising time. Rhody's rising time, fully expecting that he would still be in his
house in the roost tree: but, on going there, I found him underneath
the tree, looking very pert and animated. When I talked to him, he
went up about 5 feet in the ladder tree and answered me with whines
and soft beak-rattlings. He sat there several minutes (about 6 feet
from me) looking off to the west at the country spread out below.
He showed no indications of being hungry and refused to sing for me;
but after I had left and was about 50 yards away, he broke into song.
Rhody wants mouse. After breakfast I found him, at 8:40, now in the garden sit-
ting quietly at a strategical point where he could observe my move-
ments when I came out of the house. He was now in a different state
of mind on the food question and trotted along behind me to the tool-
house, where he took a live mouse from my fingers, bowing low with
Ritual. deep hroos and violent sidewise tail waggings. He now proceeded to
offer the mouse, with full ritual, at the cage door, 50 feet away;
thence proceeding to the mirror where he continued his devotions,
pressing the mouse against the glass.

Takes mouse He now carried the mouse to his new nest now under construct-
to nest. ion in the new house in the Peppermint Gum (Eucalyptus amygdalina),
arriving there at 8:55. He sat inside, occasionally uttering deep,
rumbling hroos, until 9:10, when he came out to sit a foot below the
house to look and listen for a few minutes, only to return to his
house. At 9:15 he sailed down, landing near and passing me with
rapidly uttered coot-coot-coots audible perhaps 8 or 10 feet.

Further A window ledge on the south side of the tool-house was his
mouse offer- immediate objective, where he arrived at 9:18 after a climb up the
ing. steep bank. There he exhibited the mouse to his reflection, then
subsided to sun his back, make a last offering of the mouse, fol-
lowed by a quick run through the rhododendrons and azaleas, through
the court, in order to make a presentation with full ritual at the
east French window of the dining room at 9:25½, thence to the south
window of the same room and then to the east window of the living
room, at 9:28½. He now considered going up to the roof, but changed
his mind, went to the bottom of the front steps to rest and sun.
(Purple finches, wrens, jays, flickers and song sparrows were now
exceedingly vocal nearby and threshers were singing 250 yds away
in Brokenwing's territory). At 9:40 I turned my head away for a mo-
ment and Rhody vanished without a sound. I found him at 9:45 at the
glass door of the basement under the living room, presenting the
mouse there. He was now but a few feet from his nest No. 8-37 (In
the oak by the living-room bay window) and I was curious as to wheth-
er he still retained recollection of it. It has been months since
he has even looked at it.

At 9:50 he made one more display at the window, then climbed
3 feet up a toyon and gazed at the nest, now partly destroyed.

He gradually climbed higher (3 feet in 6 minutes).

(Mr. W.F.Sampson now joined us: 9:56).

In the next 4 minutes he made one short move upward. Six
minutes later (at 10:00 precisely) he was in the nest and ate the
mouse almost immediately. He had carried it for about an hour and
twenty ~~six~~ minutes. He now sailed down and went to the orchard and
we did not look him up for a few minutes. He was then busily at
work on his new nest (No.1-38) and kept it up until about 11 o'clock,
when he left for the cage. We watched him working, going up and down
perfectly indifferent to our presence.

On this occasion he spent a great deal of time recovering twigs that had been dropped previously and taking them to the nest.

Plays with magpies.

At 11:20, after having spent several minutes in pretending to try and catch the magpies, he returned to continue work.

I was now absent until 1:15, having in the meantime taken the plover out of the cage and over to Dr. Reynolds', leaving the door open so that the interior would now be accessible to Rhody for the first time in nearly 3 months.

Rhody catches a lizard.

Much thrasher song.

On my return (1:15) Rhody was sitting quietly on top of the cage with a lizard in his bill, resting. The court resounded with thrasher song; Neo and his mate and perhaps a third bird were there. Wrens were singing and Anna humming-birds buzzing.

Neo and his mate look shopworn.

Wren and worms.

At 2:30, noting in the meantime that Rhody had now begun to carry the lizard around as a love token, I went to look up Neo and his mate, who were now quiet. Both came for worms at the sage patch and it was seen that both had apparently been in some sort of a fight again. Neo had a tail feather hanging down, perhaps his fourth in the last week or two, but positively not less than his third. N2 had lost body feathers here and there. A Bewick wren came and clung to the wire fence near me and I tossed it worms, which it tried to break up, but eventually abandoned. (Other wrens have eaten them whole). Neo came and salvaged the worms.

R presses lizard against bottle.

liz—

At 2:45 Rhody was outside the fence on the north slope with his mouse. He occasionally pressed it against a glass bottle, hrooed and tail-wagged.

R's behavior in cage.

He appreciates old-time luxury.

At 2:50 he came back over the fence with it and headed directly for the cage, out of sight 60 yards away, displayed at the door, entered, dropped the lizard to eat scraps of meat, picked up the lizard and presented it many places within the cage with innumerable hroos and coot-coots; finally eating it at 2:56. Now followed a long bout with the magpies in old-time form, with rests lying on the "arm-chair" shelf which he favored so much in previous years.

At 3:29 Julio tossed him a salamander and he was down after it at once; beat it to death and gulped it. His appetite is improving.

Thrush eats meat.

I now went to the home place of Neo and N2 at the south bank. A hermit thrush was eating Hamburger there. Both thrashers were at home and were fed. Within a radius of ten feet were thrashers, a hermit thrush, two wrentits, several quail and a song-sparrow.

At 3:50 Rhody was still enjoying the luxury of his shelf against the wire of the magpie cage. At 4:05 he was still there. Opening of the cage door has been a great boon to him. (60°).

Neo begins full song.

At 4:15 Neo began full song. Rhody was now making feints at the magpies from his shelf, soon becoming very active in his play, with frequent loud rattle-boos.

Rhody kills mouse but abandons it.

Neo eats from hand.

At 4:20 he came out, refused meat, but, to my surprise, followed me to the tool-house and took a small mouse from hand. This he killed but, a rare thing for him, abandoned and went off to the orchard to sun himself. At 4:34 he began to look and listen keenly in all directions: a sign that he intended to make his trek to his roost and that he wished to assure himself that the way was clear of enemies. As this would be a long process, I went to Neo's domain 50 feet away. He was in a mass of honeysuckle and roses on the fence. I thrust my hand into the tangle with mealworms. He came

at once to pick them up one at a time, gently, from my palm.

R tries to disgorge pellet. He "blows".

I went back to Rhody, who was still sunning himself (4:30), sat near him and watched. He tried to disgorge a pellet without success. I discovered that he also "blows" when he does this (the air being cool enough so that his breath could be seen). He again refused the (now dead) mouse and continued his slow march to the west.

At 4:42 I went back to Neo, repeating the action of a few minutes earlier.

R's roosting time.

At 4:49 Rhody, now on the west lot 160 yards from Neo, was seen to quicken his pace toward the roost tree, so I went to the tree to time him. He reached his "first position" in the "ladder-tree" at 4:50½ P.M.; other positions as follows:

Second at	5:01,
Third	5:07,
Fourth	5:09,
Fifth	5:10,
Sixth	5:12,
Seventh	5:12½ (After his jump across the gap).
Settled in house	5:15. (56°).

Feb.21st. (Sunrise 6:55, sunset 5:54).

Thrasher songs off in various directions; a little here early.

Rhody in the garden at 7:30 A.M., but not seen to work on his nest until 9:10, though he may have started sooner. He soon took time off for a long bout with the magpies. In the midst of this he was offered the mouse that he had killed yesterday, promptly accepted it and bolted it at once without ceremony, returning at once to his play with the magpies. After this lost its attractions he wandered about the place, going up to the roof and up into a pine about 30 feet to see what the jays were doing. He sailed down from there, went into the shrubbery and began to sing--without any distant outlook at all. He was given a piece of meat about 11 o'clock, worked a little on his nest and was ready for a mouse about noon. This was treated with full honors, carried to the roof and for an indefinite period thereafter. However, at 3 P.M., when he was again at the nest, he no longer had it. Little more nest building was done during the rest of the day and he left for his night roost about 5:10 P.M. (64°).

Neo and mate were away most of the time, but both were fed at their regular place late in the forenoon. On this occasion N2 seemed to have been home without my knowing it and only revealed herself when Neo came back home, in response to my whistle, from a hundred yards or so to the east, where he had been singing from a fence post.

About 3 o'clock both were in the brush around tree 8 and Neo was doing much singing. They were there until about 5 P.M. and were fed there.

There is as yet no positive evidence of actual nest construction by these thrashers, and I can not see that they have indicated preference for any particular location. Most of their time is spent away from this place and I doubt whether Neo has definitely established himself as N2's "one and only", i.e. beyond any chance of another male's stealing her from him. He talks to her all the time when she is anywhere near, frequently goes into the brush when I am feeding him, to assure himself that she is still there, but he will not let her have a single worm if he can get it himself; even snatching them out of her bill. To this high-handed procedure she makes a

little inarticulate protest in a mild sort of way and waits for the next opportunity patiently.

Feb. 22nd. (Sunrise 6:53, sunset 5:55).

11:45 A.M. There was much early thrasher song about 7 o'clock. A foggy morning.

Neo and mate here about 7:30, but left soon; Neo to sing off to the N.E. and the N.W. At 11:30 both were home and were fed. Neo is the most dishevelled thrasher I remember having seen outside of the moulting season. His latest broken tail feather now drags upon the ground and the feathers on his neck are thin. Two stubs of rectrices are plainly visible, and there may be more.

Brokenwing has been (as is now usual) singing all the morning. To be certain that it was he, I went down and approached him to within 20 feet while he was singing. He is a good performer.

Rhody has not been seen in the garden, but at 9:30, was sitting on the west fence and took worms from hand. I went back a little later; he cried plaintively many times, so I gave him meat. He has not been heard to sing. (56°).

At precisely 12:00M. Neo left for the Robinsons'.

Rhody was now sitting grumpily under a peach tree near his nesting operations. When I went up to him and spoke to him, he made a bluff at picking up twigs and going to work; but, although he looked up at his nest as if to carry through, he relapsed into his previous hopeless looking attitude, so I left him.

At 1:45 he was sitting quietly in his nest doing nothing, but cried when he saw me. He came down and sat in the sun on a perch, which I had located for his convenience, half-way to his house, and sat there comfortably until 2 o'clock, when he suddenly dived down, ran rapidly along the path to the east and disappeared. In a half minute he was back with a forked twig. This was the commencement of renewed nest-building and he worked diligently for the next hour.

I took advantage of the fine picture he made in his running and flying with nest material, to set up the motion picture camera and try for some slow-motion pictures.

As I took the last "shot" I promised him a mouse and, almost as if he understood, he stopped work and came to me but, at the same time, keeping a wary watch on a red-tailed hawk circling high overhead. The mouse went through the (at this season) usual ritual.

While at the mirror with it, he was shown a salamander about nine inches long and was at once interested enough to stop his display and pick it up while still holding the mouse. He soon dropped the mouse and killed the salamander and then resumed his ceremonious march with the latter, abandoning the mouse much to my surprise. Since I have considered that he regarded salamanders as inferior food as judged by nearly four years of his behavior, I thought that, the most to be expected was that he would eat the amphibian, take the mouse again and go on tour with it. But that is not what happened.

He took the salamander over the fence to the north-east, made a long march back to the west, came back over the fence and proceeded to exhibit his catch proudly at various windows. All this time the slimy creature's tail had glued itself to the bird's breast feathers, and was pulling a bunch of them out into a sort of dewlap.

The bird made no attempt to detach it, nor did it seem to notice when the creature's foot glued itself to his chin feathers. On top of all this messiness, Rhody decided to dust, with the result that for a time, more or less all of the animal was stuck to his breast. About 3:45 Rhody had reached the S.W. corner of the place and flew over the fence to the west lot and was not followed further.

At 5 P.M. (Julio) he ate the salamander in the ladder tree.

Feb. 23rd.

Another foggy morning with warm and bright afternoon.

Neo and mate came home a few times (once in response to call when their whereabouts was unknown) but for the most part remained away, probably over at the Robinsons'. The chances of their nesting at my place seem to be diminishing.

Brokenwing sang "all the time" from his territory.

Rhody was seen to resume work on his nest about 9:45 A.M. He was making play out of his trips to get twigs, landing near me and running off down the path at high speed with wings and tail spread, weaving from side to side sinuously, and returning promptly with material, as if he had a cache at some definite point upon which he was drawing, and did not need to search. He seemed to be thoroughly enjoying himself. He has such a mass of material on his front porch now that it interferes with his getting inside to work: yet he keeps on adding more, inside. Perhaps he is pushing it out.

During the day he was given one mouse, one salamander and a large piece of meat and he caught a lizard for himself. He did not sing at all, but he displayed his trophies all over the place, including the cage, the mirror and the highest chimney of the house. At least one batch of twigs was taken to the mirror.

It was not until 5:32 P.M. that he began to move toward the west. He was not followed.

Feb. 24th.

A warm, sunny day with north wind, brilliantly clear.

The thrashers remained away most of the time and were fed here only once.

Rhody renewed work on his nest about 9 A.M., making trips for material only at long intervals. Much of the time was spent quietly in the house doing nothing; but at one time, he seemed to be lifting twigs out of the interior and putting them out on the heap on the porch, as if it were too crowded inside.

About 4 o'clock it was noticed that this heap was in danger of sliding off en masse, particulary as it was then quite windy. In general it seemed as if Rhody's "first harmonic" of his present cycle were fading out.

At 5:30 P.M. he had left for his night roost, but was still sitting at his post on the west lot, whence he had gone (from the orchard) but a few minutes before.

Feb. 25th. (Sunrise 6:49, sunset 5:59).

A fairly strong north wind continues; bright, clear and warm. At 8:30 A.M., it was seen that the mass of material clogging Rhody's front porch had disappeared as had also all of the inside structure that could be seen from ground level. He was, however, engaged in

taking smaller stuff from the ground and putting it well inside. This suggests the possibility of his having deliberately removed the former accumulation because of its unsuitability to the confined space within and was now using discrimination in his selection of material of more suitable character.

The tree was swaying through a considerable arc and this bothered him, in fact: alarmed him, so that, once, having just delivered a twig inside, a violent surge caused him to bring it out again hurriedly and sit on a lower branch considering what to do about it. (I had to leave at this point).

At 8:30 also, both thrashers were home and Neo anxious for food. At 9:15 they were still on their bank and both came for food. Off and on up to 11:30 A.M., I entertained them both there. Neo adopted the practice of sunning at my feet (where he could be ready to intercept any worms destined to N2). However, I managed to circumvent him often. They were still home when I left.

Their home-staying I attribute to the north wind, which perhaps has made the place that they have been favoring lately, untenable, whereas this place is sheltered. It seems probable that Neo would have adopted this particular spot for his nest if it had not been for the persistent south-east wind earlier in the month, and that, although he held to this exposed location manfully (as the notes show) he eventually gave up and sought elsewhere, only to be discouraged (temporarily at least) with that locality which, conjecturally, the north wind has now shown up in unfavorable light. This is, of course, pure speculation and it may be that N2, like Nova in the instance of her and Brownie's last nest, objected to having a nest at my place. It may also be that N2 is Nova.

During this time Rhody did not work on his nest, but sang a few times, caught tossed worms and wandered off to the west lot. He spent most of the remainder of the day loafing and flirting with the magpies.

Feb. 26th. and 27th.

During this period there was little of any north wind, yet Neo and N2 showed strong reumption of interest in this place and were here much of the time. They were not seen to go farther away than the west lot and the adjoining lot on the east(between the Robinsons' and here). Neo sang frequently.

Rhody sang only in the forenoons and then only"by request". He partially restored his nest to its original condition--except that all material was placed inside his house and little if any was removed from it and placed on the porch. The twigs used, whether by accident or design, were shorter and lighter than those formerly placed in the structure. On the whole his actual nest-building activity lessened; further, he had only one mouse during the two days. He stayed home most of the time; but there was one period of about 3 hours when he could not be located, and that was on the day when he wanted no mice. The assumption is that the results of his own foraging efforts were satisfactory.

Feb. 28th.

There was a fairly strong south-east wind this morning, heralding the coming of another storm. This may be unfortunate in its effect on Neo and N2 as regards nesting here, as it has come just as they appear to have reconsidered the hedge as a nesting place. Despite the wind they remained in or near the hedge most of the day and Neo carried a twig or two up into it.

Rhody was at his post on the west lot at 8:30 and sang when urged. At 9:30 he was handed a mouse there and began his rounds with ritual. About noon I had forgotten all about him, when he dashed past me, still with the creature in his bill. After that I made a point of looking him up occasionally, finding him with the mouse each time. At 3 P.M. he still had it and was still optimistic of success in finding a candidate to receive it. He was still bowing, hrooing and wagging his tail sidewise, out on the baccharis-covered north slope, after five and one half hours. How much longer he carried it, I do not know, as he was not contacted again until he was found after 5 P.M. (by Julio) in his house, but without the mouse. So far as known, this was his only food today; but of course, he may have caught lizards and other "game", although he is so single-minded of purpose that he rarely drops his burden to forage.

At 5 P.M. the rain finally came.

MARCH 1938

Mar. 1st. (Sunrise 6:43, sunset 6:03).

12:20 P.M. Partly cloudy this morning after a night of rain. Brokenwing sang much from his territory. Neo has not been seen at his place on the south bank, but has sung occasionally at the Clearing and other points nearby.

At 9:30 Rhody, then on the north slope, was given a mouse, which he proceeded to carry about in proper form; but, at 11 A.M., he was at his nest without the mouse. I watched him until 12:15. For the first half hour or so he worked in desultory fashion, mostly inside, apparently trying to shape the bowl. In doing this much of the material was pushed out on to the porch. The house is too small to enable him to construct a nest in it in traditional style, and he apparently has no realization of the fact that heavy, coarse, inflexible and many-branched twigs can not be formed into a neat, hollow bowl in confined quarters--or at least not full realization. The fact that he has twice pushed the structure out may indicate partial realization of the difficulty, and it was true on this occasion that, when he brought new material for the inside, it was shorter and finer.

At 1:15 Rhody was still at his nest and, during the 20 minutes I watched him, he got only one load of stuff and this was all fine. Much of the time he merely sat in the nest. He was about all the afternoon doing very little additional work--loafing mostly and playing with the magpies. At 5 P.M. Julio gave him meat at the ladder tree. At 5:20 I went down and found him stowed away for the night. The day had remained overcast, without rain.

Neo and mate remained much of the day in or near the thicket outside the fence by the north-west corner. I fed them there twice.

Heavy rain began about 8 P.M.

Mar. 2nd.

1:45 P.M. It rained heavily, apparently all night, but there has been no rain as yet since sunrise and the day has been mostly sunny.

At 9:30 A.M. Rhody, on the north slope again, was given a mouse with the usual seasonal result.

At 10:30 he had it at the new nest in the eucalyptus house; but came down with it shortly and renewed his rounds. He took it to nest 3-37? (The one in the oak at the glade). First time this year.

Next he took it to the mirror, then to nest in the glass house in the dormitory tree.

Rhody's Cerebral "Vortex" gets tangled.

Next he discovered some of that composite plant that has velvety leaves and stems even when dry, and which is attractive to him as a nesting material--or was last year at certain stages of his work. It is also the stuff he has used to "carpet" his house in the roost tree.

He now tried to gather a billful of it while still holding the mouse, but without success. I now gathered some of it and placed it at the point where Rhody invariably takes off in carrying twigs up to his nest. In a few minutes Rhody came and saw it and was immediately attracted by it, but the mouse proved a problem. He wanted to take the weed to the nest, and also the mouse. After many struggles with the combination, during which the mouse was repeatedly dropped while he was attempting to gather stalks at the same time, he managed to hold on to a twig and the mouse simultaneously. As the mouse was much larger than the stalk, the only way this could be accomplished was by getting the stalk back of the mouse. He now carried both up to the inside of the nest. The problem now became: how to get the stalk out from "behind" the mouse without dropping the latter. He worried over this some time, with rumbling hroos (reenforced by the resonance effect of the house) and many twistings and turnings. The predicament was solved by dropping both, then picking up the mouse. Apparently, now, he had in his mind, the mouse-nest association and the weed-nest association. It was his desire to hold on to the mouse, yet he wanted to get more of the weed (as was shown later). He was now cleary confused and, in the next ten minutes was in and out of his nest a dozen times, but never coming down to the ground. He hrooed and fidgeted, plainly at a loss.

He finally took the obvious course by swallowing the mouse, whereupon he lay quietly in the nest and his hroos changed to whines. (That is: he was now formally recognizing my presence--to me). When he came down he came at once to my feet where the weed-stalks were and began happily to carry them up and place them inside, where their flexibility enabled him to stow them properly. There was no longer evidence of mental confusion and he was still confining his attention to the weeds when visitors came, and I left; (12:30). but he continued to work and, much to the delight of my visitors, he came up into the court while we were there and carried off more stuff.

About 9 A.M. Neo and his mate were in the north-east--Neo singing. (Verified by going there and feeding both near the cork elm). Neo, followed by N2 in a few seconds, moved to the echo tree 250 yards south. I then went to watch Rhody as reported above. In a few minutes Neo came, again followed by N2, trotting along the bank. They went to their "cove" near the hole in the fence. I now watched all three birds.

Neo wants to nest here still?

Neo soon picked up a twig and carried it to the kangaroo thorn about 20 feet away, climbed up and began to clear a space by crouching and pushing with his breast while fluttering his wings. He placed the twig and called loudly and melodiously for his mate. She came and both inspected the location with some care, but moved away, still remaining "at home". A visit now and then to them while watching Rhody principally, showed them at home each time, but not working.

N2 coopera-
tes and
both work,

However, at 1:30 P.M. I found Neo making regular trips with twigs to still another place about 6 feet from the first. And, for the first time N2 also gathered material. Furthermore, she placed them in the same place as Neo did his. I watched a few minutes and they continued to cooperate.

At 2:30 P.M. Neo was still working, though not very fast, at the same place. Curiously, wrentits and one Bewick's wren seemed to be attracted by what was going on and climbed in and about the very place where Neo was placing his twigs. Neo soon came out to me to get worms. N2 was there also.

At 2:45 Rhody came running by with a billful of weed stalks that he had found himself and placed them in his nest. He is spending most of his time inside. At 3:45 he was still working, but had been carrying only about one load each half hour, still using the weed.

At 3:45 Neo was still at work, but in leisurely fashion. He again came for worms without call. I could not see whether N2 was there or not; the growth is so dense.

At a little after 4 o'clock Neo was sitting quietly in his "nest", which at present is little more than a void in the tangle of honeysuckle, the interior stalks of which are leafless and of the same general coloration as the twigs of the nest. Consequently there is little to distinguish them.

Rhody was now on tour someplace with a mouse given him by Julio, and no further observations were made this day.

Mar. 3rd.

Rain again fell during the night, although not very much, and it was threatening all day; a trace fell.

Rhody worked but little on his nest and had two mice.

The thrashers also had a day off, but Neo was seen to carry material to his nesting site a few times. Altogether it was not a day stimulative to the activities of birds. Neo sang to the east, north-east, north-west and west and Brokenwing sang often in his area.

Mar. 4th. (Sunrise 6:39, sunset 6:06).

(Papers are filled with stories of flood conditions in and around Los Angeles, where over 6 inches of rain are said to have fallen in 24 hours).

At 7:40A.M., clear, chilly (46° in court and clearing) Rhody was at his post on the west lot, sunning and refusing to sing, also not interested in food. A little later he was at his nest and a rough test was made of his discrimination in selection of nest material. It has been shown that, at present, he seems to favor a certain weed; so I gathered stalks of this weed, stalks of golden-rod in about the same physical condition and other material of like nature and resembling it in appearance somewhat, and placed it near his take-off point. It was found that he would pick out the weed in preference to anything else.

At 8:40 he was given a mouse with the present usual result. It was carried until 10:15, eaten and then work was resumed on the nest in casual fashion.

In the meantime Neo had returned from somewhere or other and had resumed work at the site favored at present. Later he was join-

ed by N2, who took the part of spectator, principally. While Neo was preoccupied with the nest she came over to where I was sitting by Rhody's tree and I gave her all the meal-worms she wanted.
works. She then ran back along the path, picked up a billful of fibrous material and carried it to the nest.
N2's irides. While she was with me it was noted that she is trim and sleek in contrast with Neo and that her eyes (irides) are of the same rich, orange-brown as his. ?!? (Where does this question stand now?)

At noon: Thrashers and road-runner working at their nests.
Neo lame. Neo suddenly (about 10:30) became very lame.

12:20. Neo still lame. Just now he came "running" to me using only one leg, moving with surprising speed, seemingly no slower than when using both. This method of locomotion is really true hopping. At present, when he stands still, he immediately tucks the left foot up under his feathers. He persists in his nesting operations notwithsatnding what must be a serious handicap in carrying twigs ahd forcing his way upward through the tangled growth.

On second thought, this "running with one leg" was an amazing performance, and I was amazed. If I had not seen that he carried one foot off of the ground during its performance, I should have thought it an ordinary, fast run.

At 1:30 Neo was lying still in his nest and I did not disturb him by suggesting food. The nest, especially when he is in it, can now be clearly distinguished from its surroundings. It is, as yet, but a fragile, slightly concave platform. I went off and sat down by Rhody's tree. (He was up in the cage lying on his "arm-chair" shelf enjoying the sun and occasionally feinting at the magpies). N2 saw me from 20 yards away and came for worms on her own volition and without Neo's presence to give moral support. She is learning.

At about 2 o'clock I moved to the vicinity of the nest. Neo came promptly, still lame, with a gate made up of a mixture of one-legged and two legged running and plain hopping.

Mar. 5th.

There was early song by Neo off to the west. During the day he remained home most of the time working or sitting silently in his nest. N2 works little, but continues to take advantage of Neo's devotion to his labors to get food from me without interference from him. As late as 5:30 P.M. Neo was in his nest. At 6:03 he was not there, but when I whistled and called he scripped from somewhere near the cage and came down to investigate, scripping for a minute or so from an oak over my head. He would not come down for worms; perhaps because on account of heavy clouds low in the west it was already rather dark.

There was considerable rain during the day, yet Neo kept on working and sitting in the nest.

Rhody performed true to seasonal form, but worked little on his nest and sang not at all. Such work as he was seen to do was in line with his present "policy" of making the structure more compact than his first attempt. Thus he used no long, stiff twigs, but selected from the material made available for him that same dried weed-stalk.

I scattered, over an area about 3 feet in diameter, what I thought would be suitable soft, flexible material for him, at his take-off point, giving him a greater range from which to select. It contained leaf portions of bracken, fine honeysuckle shoots, goldenrod flower stalks, with only a small proportion of the favored

weed--all in a dried-up state. The idea in including so little of the weed was to force him to search it out from the rest of the litter in case he really preferred it, as I have supposed. I also added some of the fresh green spring growth of the same weed to see what he would do about it. In appearance it, of course, differs radically from the dried plant. Both, however, are slightly aromatic.

He would look at none of the material except the weed in its two states. The green (but slightly wilted) weed interested him to the extent that he picked up a piece or two and "killed" it by slapping it upon the ground; but he did not take it up to the nest. The old dead stalks--with and without curled-up leaves attached--were all he would use in his structure at this time, although he has been seen, rarely, to use the green weed sparingly.

(There is a suggestion here that odor may play some part in his selection of material).

Later in the day he was seen to take up a huge tuft of matted and partly decomposed vegetable fibre--almost leaf-mould, and still later a slab of thick, growing, green moss that looked as if it had been stripped--roots and all--from some flat surface.

Mar. 6th.

A rainy day, but early song by Neo, who worked at his nest notwithstanding and also sat silently in it for long periods at a time without stirring. He is lining it, and N2 has not actually been seen today helping. Neo's curved bill, by being pressed against the inside around the circumference, is a good shaping tool. Brownie also used his bill in this manner. He is no longer lame.

recovers

Rhody was not seen to work at all. He carried one mouse for 4 hours, mostly outside the north fence out of the S.E. wind. Most of the time he merely sat still holding it and looking and listening. The only shelter he was seen to take was underneath a certain pine tree, where he would occasionally shake his feathers.

Mar. 7th.

Looks like another rainy day.

At 9 A.M. Neo was still lining his nest. It looks almost complete. Neo was on hand, but after watching 10 minutes, was not seen to help.

It began to rain again not long after, but Neo continued on the job.

At 11 o'clock a long search for Rhody disclosed him sitting quite placidly under his shelter beneath the old oak, which I had thought he had forgotten all about. He cried and I got him a mouse which he honored with ritual, but he stayed under his roof. A half hour later he had gone; but at 2:30 he was again in the same place and again cried for a mouse, following me to the tool-house for it. This was unexpected as he had, sometime before 11, eaten a large piec of meat in the cage. This second mouse received full honors and, an hour later, I found him with it in his old house in the roost-tree. Instead of crying, he coot-cooted on seeing me and began to step in and out of the house, "look and listen". Finally he sailed down to the street only to return to the house by climbing up the tree itself instead of going up via the ladder tree as is usual. In and out again several times, and I decided to leave him to his own devices.

It will be observed here that he sought the roost tree not because of the weather (the sun was now out) nor to retire for the day, but in pursuance of his search for a mate.

Mar. 8th. (Sunrise 6:33, susnet6:10).

11:20 A.M. So far the morning has been alternately sunny and cloudy.

At 9 A.M. Neo was sitting quietly in his nest, which is now deep and well lined, appearing to be completed, although this is not by any means certain. After 9:30 he was not seen there until 11 o'clock, when he was calling loudly for his mate, apparently absent. In any case, she soon came and both ran toward the nest, Neo deflecting from his course to get a worm or two before going the rest of the way.

Rhody selects building material with discrimination.

At this point I went to watch Rhody, who was going toward his nest after having had a long drink. He stopped at the scattered nesting material which I had placed at his take-off and examined it. (I had forgotten to mention in my yesterday's notes that California sage,"Old man", Artemisia Californica, had also been placed with the other stuff, and ignored in favor of the weed). He gathered a billful of sage and the green weed, but spotted a piece of the dry weed, dropped the rest and took it; but in picking up the latter, either by accident or design, also got some of the sage and a piece of brake two feet long. All of this he took up and stowed carefully inside the nest: a singularly sweet-odored cargo which with the odor from the leaves of the peppermint gum filled the air with fragrance.

Rhody has never before been seen to give so much attention to lining a nest with soft material, not to mention stuff so pleasant in odor.

Rhody seems to be on downward slope of his "harmonic".

This was the~~e~~ only work actually seen during the day. The present "harmonic" appears to be on the down slope. He does not sing at present, even by request, although he still treats mice with full ritual and carries them about for hours.

Neo did little work at his nest, although he sat in it occasionally again during the afternoon. This may be the "thinking" period referred to in connection with Brownie's nesting. Its purpose is not clear. It may be to give the material a permanent "set", or to guard the nest, or to wait for his mate or it may be a mere reflex, as a nest "ought" to be sat in by somebody.

Mar. 9th.

A day of alternating sun and cloud without rain, but a storm of gale force was reported 600 miles to the southwest this morning, headed this way.

There was much confused thrasher singing all forenoon off to the east and the northeast, Neo apparently being one of the performers, for during quiet intervals he sometimes was found sitting in his nest. He seems to be having the same experience with N2 that Brownie had with Nova: difficulty in keeping her on the job. I suspect that there is competition for N2's favors, although when she contributed her mite to the nest, it would seem an indication that she accepted it. It is practically entirely the work of Neo--lining and all-- so far.

At 5 P.M. Neo was back in the nest again. For several days it has been his practice to sit in it at about that time.

Rhody was not seen to work at his nest at all, although he chose to sit for extended periods a few feet from it on a cross bar which I placed above the fence to facilitate his goings and comings.

He always uses it as an intermediate point in going to and from the nest. He has become so smitten with it that he now likes to sit on it as a regular preening and observation point.

He did not sing today at all and had no mice. He ate the meat in the cage about 9 A.M. About 3 P.M. I found him in there with a small alligator lizard, quietly holding it. A large salamander was tossed to him to see what he would do about it; the expectation being that he would eat the lizard, then take the salamander, and that is what happened. The salamander received full honors, including presentation at the mirror. It was finally eaten about 4:30 on the cross-bar roost above referred to. He did not come down from there until nearly 5 o'clock. At that time I happened to uncover another salamander (about 9 inches long) so offered it to him. I did not think he would take it this late in the day, especially after just having eaten the other one; but he did, beating it to death on a rock--a long job--then gobbling it without ceremony. Either his tastes have changed, or I have been in error in assigning a low rank to these "water-dogs" on his list of preferred comestibles.

About 5:15 he started for his old house for the night. Thus far (after nearly four years) it would appear that a nest is not used as a sleeping place. His old house might be considered the only exception; but I do not think it is regarded by him as a nest primarily. It was used as a sleeping place long before he added any embellishments. We might even go so far as to assume that the fact he s sleeps in it throws doubts upon its ever having been regarded by him as a nest, except perhaps in one of his harmonics.

Mar. 10th. (Sunrise 6:30, sunset 6:11).

Storm not yet arrived.

The storm last night was still 500 miles to the west-southwest. The only evidence of it here, so far, is a strong wind straigh from the north (8 A.M.). Partly cloudy.

At 8:15 A.M. Neo was sitting quietly in his nest; N2 was in the bushes nearby.

Neo still lines nest.

At 9:15 he was picking up a few soap-root fibres from an old towhee nest that I had scattered about;and taking them to the nest; so he does not regard the nest as completed. N2 was on hand, but not helping.

Rhody's "harmonic" not faded out entirely.

At this time Rhody was selecting a sheaf of his favored weed from the miscellaneous offering I had prepared for him at his take-off point--so, his present "harmonic" has not yet faded out. On coming down after delivering his load inside he ran off quickly and disappeared as if on a definite, predetermined errand. I thought it was for more supplies, but in a minute, he dame running back again empty handed, came directly to me and stood looking at me. I did nothing, purposely. He booed and edged up the bank behind me; he wanted a mouse. We reached the tool-house in a dead heat. Here he cried and was rewarded. This mouse was needed for display purposes.

This proved to be all the food he wanted from human hands during the day, and also the last work seen on the nest.

The north wind died out during the forenoon and no rain fell until about 10 P.M.; the storm appears to have spent itself largely before arrival.

Being otherwise engaged, little effort was made to keep in touch with the birds the rest of the day, other than to verify occasionally the presence of Rhody and the two thrashers.

hite-throated parrow still ere.

With the exception of one or two days, this bird has been seen every day since he was first noticed--usually at the feeding station outside this window with the other Zonotrichi as.

Mar. 11th.

Rain during the forenoon; only the outskirts of the reported storm, so far, and with little wind, has reached us.

About 11:10 A.M. I drove along the street by the west lot, returning from an absence of an hour or so. Rhody was near his post in the open about 100 feet away. I stopped and called to him. He located me at once, although he could not possibly see more than my head, cried, then came to the edge of the bank. I got out and tossed him a couple of dozen meal-worms, which he caught expertly one at a time. He was perfectly dry.

A few minutes later I showed him the red box from the fence at the Clearing. He ran toward me, came over the fence and had his mouse, which he carried off with ceremony.

While the red color of the box, naturally, was not the entire stimulus to which he reacted, it did not, at least, deter him from coming, and sufficient instances have been cited in these notes to show that the red-box has often proved the trigger that has released action by him when he had been hesitating whether or not to come to me. The object in referring to it here is not to attempt proof of the effect of red color upon him--this one instance proves nothing--but to draw attention to the contrast between his behavior in the presence of red and that of Archie and Terry at a time in their careers when red must have been a novel sensation to them.

While I was engaged with Rhody, Neo was singing loudly over at the Robinsons'. I went to his nest and whistled Brownie's "purple, one, two, three" call. This brought him home fro about 175 yards away, shortly followed by N2. He was given meal worms while N2 watched. Soon he picked up a few soap-root fibres and took them to his nest and sat there while N2 came for her share of worms. Neo, about 6 feet to my right, now began to call loudly from the nest in musical phrases. I think he could not see N2, who paid no visible attention whatever until she had had enough worms; she then joined hi

Both birds were dry; but Neo's tail is rapidly "getting no better fast". Most of the rectrices are now broken off entirely and appear as stubs of half their normal length or less. I can not be certain that he has more than one full-length feather left in his tail. This mutilation, together with the scarcity of feathers on the back of his neck and general mussed-up appearance may be due in part to his labors in thrusting passageway through tangled growth in nest building; but I am strongly inclined to the view that it is mostly due to fighting and that he has not had a clear field in his courtship.* (See back notes for example of thrashers pushing each other over backward when fighting: something not good for tail feathers).

Neo and N2 both in nest at same time.

12:50 P.M. I went to the thrasher nest and was surprised to see it occupied by a thrasher that apparently had a head at each end of its body and no tail: Neo and N2 both in it at the same time, looking solemn but comfortable.

An hour later only Neo was in the nest, but N2 was foraging about nearby. (Calm, cloudy, 57°).

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*But see notes of Mar. 12.

est especially
dapted to its
ocation.

This nest, as did one of Brownie's built within 5 or 6 feet of the same spot and in the same honeysuckle, illustrates the ability of the thrasher to adapt its structure to the nature of the available support to the end that labor of construction and quantity of materials used shall be minimal. The interior of the honeysuckle consists of a rather dense tangle of leafless stalks twisted intricately. It is thus possible to dispense with most of the usual framework of the nest and build one that is nearly "all lining". That is what has occurred in this instance as in the case of Brownie's referred to above, and these are the only two examples of the kind seen at this place since I have been watching the thrashers.

At 3:20 P.M., raining slightly, I drove past the west lot. Rhody was sitting bolt upright in his "4th. position" in the ladder-tree. He ignored me utterly when I called to him--not even winking as far as I could see.

I went by again at 3:30. He was now in the house. It was raining hard. As this is an early retirement for this time of the year and this stage of his mating cycle, the question arises, is this sudden apparent regard for weather conditions, which has been negligible recently, a further indication of the subsidence of the current harmonic on the fundamental wave of his mating cycle?

At 4:45 he was still in his house--undoubtedly a genuine retirement for the day and as immovable as a stuffed bird. Talk and my repertoire of road-runner sounds addressed to him at about 8 or 10 feet range produced no physical reaction from him whatever during the 10 minutes I stayed there. The red box, held up so that he could not possibly have missed seeing it had no effect at all. It was precisely as if we had been in two different worlds. It is not the first time he has ignored me thus when his mind has been on weightier affairs. He is an adept at putting one in his proper place.

Another trick he has, but which I have always forgotten to record, is one frequently performed when walk up close to him at a time when he is not hungry and he can think of no good reason why he ought to be polite to me. He turns his head to look at me, if I am not in his direct line of vision, then ~~slowly~~ directs his gaze at my feet gradually allowing it to shift upward to my face, thereafter looking away as if he could not stand the shock! One feels as if he had been weighed in the balance and found definitely lacking in pulchritude, to mix metaphors.

Mar. 12th.

The fringe of the storm is still with us, bringing gloomy skies and occasional showers; temperature about 60° max. To date there has been about 30% more rain than normal and about 50% more than for the same period of last season.

The weather did not cause Rhody to stay in his house long. At 9:40 A.M. I went down and found he was out; but a few calls brought him threading his way quickly through the thicket to take a mouse from me. This mouse received full honors. No matter how often Rhody responds to call and comes for his mouse, I never fail to get a tremendous "kick" out of this exhibition of confidence.

It appears that Neo has two full-length feathers in his tail; but of these one is mutilated and will probably break off. I doubt, now, if all this damage is due to fighting. It occurs to

me that the feathers may have been structurally weak at the points where they have failed due to a period of defective nutrition experienced by the bird while they were growing out, and that they have been unable to stand up under stress of fighting and contact with obstructions.

Notwithstanding the squally day and the unfavorable wind direction Neo has remained near (or sometimes in) his nest most of the day (4:50 P.M.).

Rhody seems to have kept mostly to the brush on the west lot. About 4 o'clock Julio went down to look for him and Rhody came up behind him and cried for his mouse and was accommodated.

At 6:16 P.M. Neo was singing off to the west. He therefore was singing after sunset, but by a narrow margin.

March 13th. (Sunrise 6:26, sunset 6:14).

A night of heavy rain, but Neo was singing to the west at 6:00 A.M., anticipating "sunrise" by a wide margin.

12:40 P.M. Up till now there has been a succession of rains (and one heavy hail storm) with periods of bright sunshine in between when roofs and ground have steamed.

At about 9 A.M. Rhody's song was heard nearer and nearer. (First unrequested song for several days). We met at the entrance where he caught worms dexterously while warming his back. Now followed a half hour of song spaced two to four to the minute. A heavy shower and he hurried to his shelter under the old oak, although he was sitting near his house in the eucalyptus when it commenced. The two refuges are not within sight of each other. I gave him a mouse, which he carried about until about 10 o'clock before eating it; several times he had taken it to his nest. On one of his trips he attempted to pick up nesting material while still holding the mouse, but abandoned the effort.

Meanwhile Neo and his mate were off to the east in the brush on the south-facing north bank. About 11 o'clock Neo returned when I whistled and spent the next hour with or near me, eating worms and singing. I no longer have to guess at the number of rectrices left in his tail (of full length). The answer is one and that one is bent at right angles and will not last long--perhaps it is off already. He is now the first bob-tailed thrasher of my acquaintance in adult plumage. Roughly, I estimate his tail is now about one third or less its normal length--perhaps two inches or less long.

While I was feeding him he talked; so I suppose N2 was somewhere near. When he mounted to a rose-bush on the fence twenty feet away to sing loudly, she came, but from the opposite direction, and to me, not to him. He could not see her from his perch and she seemed to pay no attention to him whatsoever. I stuffed her well with meal-worms, and Neo continued his song, facing away from both of us.

While this was going on Rhody could be seen 40 feet away in a fit of exhibitionism at the entrance. Tiring of this, he unexpectedly appeared between N2 and me, made a playful feint at her and passed on without breaking his stride.

Neo still continued his song directing it apparently to the east, as if supposing N2 to be off there where both had been a little earlier. I was almost certain that he was unaware of her presence, but when the milk-delivery truck roared up the driveway not over 20 feet from either bird, both fled momentarily only to reappear shortly together. Neo now certainly knew his mate was here, but

he returned to his same singing post and resumed song, facing east, while N2 was still present. It would seem, then, as if the singing was not a call for his mate, but announcement of his occupancy of the territory.

5:35 P.M. During the elapsed time we have had two more hail storms accompanied by strong winds, and several heavy rains of short duration. In between it has been calm and sunny.

Rhody promptly sought the shelter of his roof under the old oak each time. When it hailed he watched the hail-stones bouncing in front of his retreat with manifest interest unaccompanied by fear. Thus he would stretch out his neck, lower his head close to the ground and look at the stones with first one eye and then the other.

The thrashers stayed home most of the time.

At 2:45 Rhody was given a mouse, which he carried for only a few minutes, then ate. At 3:20 I was surprised to find him behind me crying. It could only mean that he wanted another mouse, so I started for the tool-house just as another flurry of hail commenced. Rhody followed part way, but sensibly ran to his shelter. Here he received the mouse with full honors, eventually eating it in his new nest at 4:20.

At 5:30 he was still in his nest--unexpectedly.

At 5:55 he had left for his old house in the roost tree; so nest 1-38 is still a nest and not a sleeping place .

About 6 I whistled for Neo. He came promptly through his hole in the fence, ignored my offers of worms, ran past me and climbed an oak behind me, where he began calling quill, quilk, quilk, the shortened form of the thrasher queelick. Brownie and Brownia used both, but I do not now recall having heard either Neo or his mate use either up to the present--in fact I have been wondering for many days why this fairly common thrasher call has been missing from the "vocabulary" of these two birds--and for that matter, am still wondering.

Neo soon changed this call to the more common scrip, then followed with full song for about 5 minutes; when he flew toward the west. His song was the most varied yet heard from him, containing many unfamiliar phrases, some of which were strongly reminiscent of Brownie's, but to my ear, not precisely the same.

Mar. 14th.

A sunny morning; the storm seems to have passed, much I imagine, to the satisfaction of everything that has a back-bone except, perhaps, fish and amphibians!

Neo's song was heard to the west about 6:30 A.M., moving closer. About 7 he was regaled with Hamburger by Julio. At 7:20 I found him sitting quietly in his nest.

At this time Rhody was warming his back at his post on the west lot and interested in my efforts to make him sing only to the extent of raising and lowering his crest and looking at me over his shoulder.

At 8:20 the occupant of the thrasher nest was N2, also sitting quietly as if meaning business. Neo was absent, but thrasher song sounded off to the N.E.

I could hear Mrs. Scamell talking to Rhody, who was working his way home along the street. At 8:30 I saw him sail down from nest 1-38 as I was verifying N2's continued presence in her nest, and run rapidly up the bank toward the tool-house, where I found him waiting for me when I got there. He greeted me with a sonorous rattle-boo and was so impatient for action by me that he ran first to look in through a window and then came in through the door. He needed this mouse at once--not for immediate consumption--but to carry about as an offering.

2 still in nest. At 9:20 N2 was still on the nest, Neo absent; but song was heard from the N.E. and also from the N.W., the former probably by Inver in his territory and the latter positively by Neo, as I went there and found a bob-tailed thrasher running around on the ground, climbing bushes, singing. It seemed as if he and Inver were having a long-range contest; but I wonder if he knows where N2 is and is rejoicing in momentary freedom from his worries, or whether he thinks he has lost her and is looking for her. It may be that this sudden devotion of hers to the nest has not been anticipated by him.

o takes charge. At 9:40 it was Neo on the nest.

lls for relief. At 10:00 he called loudly with a short musical phrase.

At 10:08 he called again with a longer set of phrases. There was immediate answer from some place close behind me in a short, loud, but equally richly toned phrase. Neo now began to probe beneath his body with his bill, looked restlessly about him and sang repeatedly in full, rich tones, receiving no answer.

comes, but shift not made. Unprecedented behavior. ONE EGG.

At 10:13 N2 appeared at the soft-food dish and ate for 3 minutes as if preparing for a long stay in the nest. She then proceeded toward it in leisurely fashion wiping her bill as she climbed to the nest. They conversed in low tones, but to my surprise, N2 came down again, unhurriedly, and wandered off. Neo remained in the nest for a minute or two, calling. Neo answered once 30 or 40 feet away, in less musical tones. Neo now got out of the nest. I looked into it hastily. One egg. Neo came back, called again. No answer. He now dropped down to the ground, ran to the drinking dish and drank deeply. He was very thirsty--hot in the nest? He started back to the nest, but I interrupted by offering worms, which he came and took, but was anxious to resume his incubation and hastened back, carrying a worm with him. Now, if ~~I~~ memory serves me (I am not going to read 1542 pages of notes to find out!) this is unprecedented thrasher behavior at this place, in that, although call for relief was answered in due course and the mate came to the nest, no shift was made, and the bird in the nest left it not only once, but twice, only to return and take up the work which its mate should normally have taken over.

While I was watching these events Rhody trotted past me still carrying hopefully his precious mouse in what is probably a hopeless search for a mate.

At 11 precisely a loud call: Ter-ieu', three times repeated in close succession, sounded from the thrasher nest. I went there, finding N2 on the job. Neo was scripping in the East lot. He went farther away and sang intermittently for the next 20 minutes. N2 did not call again. At 11:25 Neo appeared at the food dish and proceeded to load up as N2 had done, then went directly to the nest, refusing my offer of worms. Arriving there N2 greeted him with "silent" talk. (Opening and closing her bill as if talking, but making no sound audible to human ears. This is true thrasher form).

Neo "gurgled". (True thrasher form again). N2 arose; Neo gazed at the egg a moment, stirred it with his bill, settled firmly. N2 went to the food dish and ate. When I offered her worms she accepted readily and was given a good feed. We are now getting down to business in thrasherlike manner and from the human viewpoint, are seeing the thrasher nesting pattern unfolding and repeating itself--with an entirely different pair of birds--as revealed by Brownie and his mates and the same human relationships developing.

Rhody, now mouseless--as seen from the outside at least--was now sitting quietly on his take-off with nothing to do.

During the afternoon the thrashers, when observed, were attending strictly to business up to 5:45 at least. I was then down at the Scamell's watching Rhody present a mouse at various reflecting surfaces of an automobile standing at the curb. Neo was singing across the street at tree 8. I kept an eye on his doings also. Soon a second thrasher joined him, whom I suspected to be N2, so I went to the nest, finding it unoccupied--another divergence from thrasher routine here. Half an hour later Neo was in the nest.

Mar. 15th.

Fair all day, but toward sunset, looking threatening. The thrashers seemed to have their routine in good working order, though I was away several hours, so observations are not complete. No failure to keep the eggs covered was seen.

Rhody seemed to be abroad much of the time, although he ate his meat at the cage and, at 1:30, was seen bringing home a large alligator lizard with full ritual. Near the mirror he spied a piece of meat placed there a short time before and tried repeatedly to pick it up while still carrying the lizard. He did not want to eat the meat, because when the lizard was accidentally dropped (2 or 3 times) he then was able to secure the meat. Instead of eating it, he tried to pick up the lizard without dropping the meat. He finally decided against the meat and resumed his ritual with the lizard alone.

Mar. 16th.

Heavy rain all the forenoon--perhaps also during the night. Julio, without orders, placed a rubber mat to keep the rain off of the thrasher nest, Neo being in it at the time and not leaving. I feared the effect on N2 when it came time for her to take over.

At 10:30 I found the nest unoccupied. There were three eggs; so N2 had laid one earlier in the morning. I had the cover taken off at once and shortly N2 was on the nest. However, the rest of the day, N2 seemed to shirk her responsibilities and Neo did most of the incubating, but even he, when N2 failed to come on call when he wanted relief, left the eggs exposed for indefinite periods. Notwithstanding this defection on his part, it was he that was the more faithful bird and he could be counted on to take up the task even when it was not his turn, sooner or later.

In the afternoon I made a light framework and placed a sheet of "flexoglas" (Wire cloth glazed with cellulose acetate) to form a roof several feet above the nest. While placing this the nest was unoccupied, but both Neo and mate took up their duties in due course after the job was finished.

At 5:30 it was N2 on the nest.
At 6:05 Neo.

Rhody discovered me shortly after I went to the thrasher

nest this morning. It was raining hard and he had evidently been out in for some time, as he was pretty wet and looked small and not at all impertinent. I did not need to urge him to follow for his mouse. While he received it with ceremony and started to carry it around, he ate it before long. He stayed home most of the day; ate his meat and wanted no more mice. He was not seen to work at his nest. The afternoon was mild and clear.

Neo feeds mate on nest?

I forgot to record an incident which occurred on the 15th. I had been giving Neo worms while his mate was on duty in the nest. After he had all he wanted, apparently, he held one in his bill and stood facing me patiently. I tossed him three more, all of which he kept in his bill. After a pause he started for the nest making the "blue-bird" call: the "approach-to-the-nest" call, especially when carrying food to the nestlings, and not used *regularly* at other times, although as these notes show, it is not *always* restricted to that occasion. He went to the nest, but I did not actually see him give the worms to his mate.

Mar. 17th. (Sunrise 6:20, sunset 6:18).

Day dawned partly cloudy, but calm.
Neo was heard singing at 5:45 A.M.
At 8:10 I went to the nest, which was occupied by N2.

Neo feeds N2?

10:40 A.M. Up to this time affairs appear to be proceeding normally at the thrasher nest. At 10:20 the incident described above was repeated, with the addition that Neo, on arriving at the nest, gave the rapid clucking call used sometimes when feeding the young and they are slow to respond. I was watching, but could not be absolutely certain that N2 took the worms, but in the dim light, the attitudes of both birds indicated a feeding operation. N2 left almost at once and Neo took charge.

A somewhat unusual series of acts by Rhody.

At 8:15 Rhody was sunning his back at his post on the west lot. I tried to get him to sing, but he would not, preferring to consider my noises as an invitation for him to come to the fence. There I handed him 15 meal-worms, one at a time, which he took with the utmost delicacy. (He had caught and eaten a Painted Lady butterfly while on the way to me). We were about 30 feet from tree 8 where one of his old nests still is. He suddenly picked up a twig; droped it; picked up another; spied a fragment of that composite weed; dropped the twig and substituted the weed. He now saw a clump of stalks of this weed still attached to the ground and began pulling them up. Instead of taking them to tree 8 as I half expected him to do, he now went to the sidewalk and carried them approximately 150 yards to nest 1-38 in the peppermint gum tree.

On coming down he followed me closely as I went toward the tool house, but stopped 20 feet from the door and looked intently north. After a little back-sunning he sailed gracefully over the fence and down toward a small pine tree growing on the baccharis-covered slope. In and near it were purple finches, red-breasted nuthatches, spotted towhees and Bewick wrens, all vocal. I think it was their activities that attracted him, as he often investigates these affairs without taking part, except as a spectator. He now came back and had a long session with the magpies, appearing intensely interested in them.

I placed a forked twig of the weed where he could not help seeing it when he lost interest in the magpies, anticipating that he

would be unable to resist the temptation of carrying it off despite the fact that it looked just like any other blackened and sodden fragment of shrubbery material with a gloss of algae on it here and there. As soon as he saw it he seized it and hurried toward the nest. Meanwhile I had put some more of this same plant at his "take-off" point and he did not fail to discover it, adding a portion of it to his burden and arranging it carefully inside the house.

I nearly missed recording the most unusual feature of this series of events: As he approached the nest tree with his burden brought from the west lot, he began to bow and hroo--that is, he carried this tuft of nesting material with the display heretofore--unless I have completely forgotten--used only with food such as mice and lizards.

Mar. 18th. to 22nd., incl.

During this period of continued rainy and cloudy weather with little sun I was pretty well occupied in transplanting azaleas and rhododendrons to less crowded situations, therefore did not keep close watch upon the birds. However, my work was mostly within 50 to 100 feet of the thrasher and road-runner nests, so it was possible to keep pretty well informed upon local events.

Rhody on descending slope of his harmonic

Rhody worked little on his nest, being seen to carry material to it only once or twice a day, and it was all lining--mostly fragments of the composite and some bunches of pine-needles. He sat in the nest a great deal as though incubating--sometimes as long as an hour or thereabouts. He was not heard to sing, but accepted mice and salamanders, usually with appropriate ceremony. Some of the mice he carried about for as long as 3 or 4 hours, but others were eaten in less than a half hour. He also accepted centipedes (some of which are now carrying clusters of eggs) but did not display for anything so small. He continued his visits to the magpies and once was seen to spend an hour on the roof of the house across the street, where his vocalization was confined to rattle-boos entirely.

Thrashers incubating faithfully.

The thrashers, since deviations from standard routine were noted herein, settled down to conscientious application to the job of applying calories to the eggs and the few changes of shifts actually observed in progress were made without exposure of them for more than a few seconds. As a rule changes were made without the bird on the nest calling for relief; but there were exceptions.

There was little song anywhere near the nest and not much more elsewhere. Neo, when off duty, especially in the morning hours, could generally be counted upon to visit the extreme north-easterly boundaries of his presumed territory and there sing in competition with the bird supposed to be Inver in his area.

Even Brokenwing, who has been the most persistent musician, during the past few months (within a radius of 300 or 400 yards) declined markedly in frequency and duration of song. Probably he has a nest also.

White-throated sparrow still here.

The white-throated sparrow continues to visit the feeding station just outside this window in company with the other Zonotrichias, with whom his relations seem to be perfectly matter of fact. As far as I know, there is only one of him here.

Mar. 23rd. (Sunrise, if there had been one, 6:10, sunset 6:24).

A rainy night and still raining (10:45 A.M.). "The climate

is changing". February, usually one of our finest months, was a complete"washout", literally and figuratively. March, usually one of our most disagreeable months, however, has run true to form! (And "then some!").

The thrashers are comfortable when in their nest, protected from the rain by the roof installed for their benefit.

At 9:30 Rhody, meek and disconsolate looking, stood in the pouring rain looking at the kitchen door wistfully, as I thought, when I came upon him there. I watched him (as I had nothing to offer) as he walked up the steps and "got a handout" from Julio, of Hamburger, just like a tramp at the back-door. He would only pick little crumbs off of it, so I got a mouse for him. He brightened up at once when he saw the red box and reached into it promptly to extract its occupant. He was inclined to accord it seasonal ritual, but after one faint manifestation, gobbled the creature.

plays a "dirty rick"on Neo

At 12:05 I went to the thrasher nest, finding Neo apparently just off (as he was dry) and eager for worms. I filled him up and he carried four to the nest and there offered them to N2 with soft cluckings rapidly uttered; but, instead of taking them from him, she ducked down beneath his bill and ran away, leaving Neo looking blankly down into the nest. There was nothing for him to do but take over the job of incubation and eat the worms himself. This looked like a dirty trick played on him by N2: one which I suspect she has resorted to before. She would not come to me for worms.

Testing Rhody with imaginary [illegible].

I now went to look up Rhody--nearly stepping on him as he stood, huddled up, (raining) on the path near his nest. He was pleased to catch tossed worms. To test his powers of association I feinted at tossing him a worm and he immediately looked all about his feet to see where the imaginary insect had landed. After this he was, of course, given real worms.

Later in the day he was given another mouse, which was accorded full ritual, carried about, and not eaten for several hours. He was not heard to sing during the day; worked little on his nest, but sat in it for long periods at a time.

Thrasher incubation continued faithfully.

Mar. 24th. (Sunrise 6:09, sunset 6:25).

The day day dawned clear. Thrasher song (probably by Neo) was heard at about 6 A.M., soon ceasing (as he took his turn at the nest?).

At 7:25 A.M. Rhody was in his new nest in the peppermint gum, but came down when I spoke to him, looking very impertinent. Sutton's painting of a road-runner head in his Birds in the Wilderness illustrates precisely the pose of his head as he looked at me and the pert, animated expression.

He went directly to the magpie cage to study its occupants at close range with bill almost against the wire and an expression of intense concentration as he followed their every movement by shifting his eyes and head. Every now and then he would "gather" as if to spring at them only to relax slightly from his tense pose. I left him still engaged, but found him again in his nest at 8:20, where he stayed until 9, then came down for one twig and was still sitting quietly (except for an occasional whine) at 9:30.

It now began to rain drearily as if it would never stop;

but it was bright and sunny again in half an hour.

In the meantime, while N2 was on the nest, I had given Neo a good feed of meal worms and he did not take any to his mate.

I went out again about 10 A.M., finding Rhody on his way to the sage-patch to sun his back. Neo discovered me there and came for worms; Rhody, hearing an outcry from the magpies, ran to the cage to continue his scrutiny of them.

eo bathes in the water on the leaves.

I went to get more worms for Neo and, on returning, found him bathing in the rain that accumulated upon the leaves of the honeysuckle, just as if he were in a pool of water. I do not remember having seen a thrasher do this before, although it is not uncommon here on the part of some other birds. He promptly accepted my invitation to have more worms and, again, took none to his mate.

A half hour afterwards I again gave him worms. Two of these he carried toward the nest, which I reached first. When he arrived he no longer had the worms and change of shift was made without comment by either bird.

March 25th. to 27th., incl.

These three days were brilliantly clear from sunrise to sunset, with occasional winds from the north keeping temperatures down to maxima in the low seventies.

eo more faithful at nest?

The thrashers incubated faithfully; but it is the male, Neo, who appears to have the greater sense of responsibility toward the obligations of prospective parenthood. Thus, N2 seldom has to call for relief as Neo generally takes charge after relatively short absences and goes to the nest quickly when on his way there. N2, however, frequently has to be called four or five times in 15 minutes before she appears, and then she dawdles along, stretching, preening, pecking at the ground and wiping her bill, taking a roundabout course through the shrubbery.

timulus which impels Neo to call for relief appears to be hunger.

As an illustration: On the 27th., about 1 P.M., I went to the nest to watch change of shift. Neo had been calling several times at 3 to 4 minutes intervals. He continued to call melodiously at about the same rate, as I sat nearby. In about 10 minutes more I could see N2 coming in the manner described, eventually taking the nest. Neo went at once to the soft-food dish and ate heartily. He then came to me for a few worms. The last one he held a moment in his bill, uttered the "blue-bird" call, started toward the nest; ate the worm before getting there, and immediately resumed incubation as N2 stepped out. He had been out of the nest only about 3 minutes and apparently was under no obligation to take up the task again so soon. However, it should be noted that he had eaten his fill in this short period and this suggests that the stimulus which caused him to call for relief was not weariness of the task, but hunger, and that as soon as this was satisfied, he went cheerfully back to the job of his own free-will. I suppose Nature has so arranged matters that incubation evokes a sense of well-being in the bird--the bird likes to incubate --when not under stress to provide for its own bodily needs at the time. (If such be the case, then why did N2 give up this pleasant occupation so readily after only 3 minutes?)

hrsahers "like" to ncubate?

hody not singing.

hody uses old titmouse nest in lining.

During this period Rhody was not heard to sing at all. In the mornings, about 7 or 7:15, he was generally near or in the nest, and did some work lining the structure. Once he was seen to use part of an old plain titmouse nest for the purpose, which Julio had thrown upon the ground in cleaning out the titmouse house. I gathered up the remnants of this nest and placed it in four piles near

hody also
ses felted
azalea
roots.

Rhody's take-off. I also put with them three piles of the felted, fibrous roots of the azalea containing some earth and peat. Rhody used all of this in his nest. This is the first nest to which I have seen him carry any considerable quantity of material of this nature, that is, material suitable for lining and binding. A curious trait: He may not go near the nest for hours, and then he spots some tuft of soft stuff--perhaps when a hundred or more yards away from the nest--and nothing will do but he must carry that all the way to the nest and perhaps forgot all about doing more work until the next day. As a matter of fact, he does not work much on the structure; but at present all of it is lining.

curious
trait.

other curious
trait.

Another curious trait: While he likes to sit in this nest at any hour of the day, often for long periods, he is most apt to be found there (at present) an hour or so before roosting time. He may stay there until 6:15 P.M. and then he deserts this place that he finds so comfortable and goes to his old house to sleep for the night If the new house is good enough to build a nest in and rest in indefinitely, why is it not good enough to sleep in?

This was also a period of much attention to the magpies and increasing tendency to wander into portions of the grounds (including the immediate vicinity of the house) not much frequented by him.

March 28th.

Occasional clouds and a little colder.

Thrashers incubated constantly, Neo, when on the nest, occasionally calling for relief. Once again, when he came off duty, I fed him well and he drank deeply. After sunning and stretching for a few minutes he relievd N2 at the nest, having been off just 12½ minutes.

ncubation has
roceeded
14 days.
3
day after

The first egg was laid on the morning of the fourteenth, so incubation of that egg has proceeded 14 days. Unless the eggs are infertile or the irregularities noted in incubation during the first day or two have had an adverse effect, there should be results by tomorrow.

hody not working on
nest.
Takes 2 mic

Rhody was not seen to carry material to his nest at all, although he visited it several times and sat in it for prolonged periods. He was given a mouse at about 7 A.M. and, to my surprise, appeared at the window of this room about 9 A.M. and wanted another, which was given him. He later ate his meat in the cage.

This was a day of much preoccupation with the magpies.

Mar. 29th.

Bright and clear, but chilly except in the sun, in the morning.

Rhody had his first mouse at 8:15 A.M. and started his round

No eggs hatched as
et in thrasher nest.

10:20 A.M. At 10:10 A.M., at change of shift, it was seen that there were still three eggs in the thrasher nest.

As N2 approached to take over, Neo, who had been calling impatiently with musical phrases differing from those used yesterday, left the nest before her arrival, but she soon took charge. N2 is more shy of me than she has been.

uses wilted
composite
leaves.

Rhody was seen to add material to his nest once. He used a tuft of azalea roots to which he added leaves of the composite weed of this year's growth, which I had placed in the sun so that they were withered.

He stayed home most of the day loafing and playing with the magpies.

hody honors a Jerusalem cricket with full ritual.

About 5 P.M. he was given a live Jerusalem cricket and displayed his full ritual of bowing, hrooing and tail-wagging. He did not carry it about however, but stayed in one spot and ate the cricket after about 15 minutes. This is the first time (according to my recollections, only) that he has been seen to accord such privilege to so small and insignificant a creature.

Mar. 30th.

Bright, sunny weather continued throught the day.

Rhody was seen in the garden before 8 A.M. by Edwin V. Miller, a Zoology stu~~r~~dent who is studying the Bewick wren here and elsewhere. Rhody was not seen again until 2 P.M., when he was at the cage for his meat. Although looked for repeatedly, he was probably off some distance, perhaps looking for a mate during his absence This is the first time for months (?) that he has been away so long.

Thrashers have one chick.

About 10:30 N2 was seen approaching the nest carrying food; but she would not enter while I was watching there, so I left. In about an hour Neo was seen carrying food. He didnot mind mind my presence. He clucked as he reached the nest, N2 responding with "silent" talk, finally leaving, exposing two eggs and one tiny youngster down whose throat Neo shoved a small worm. There was no feeding by regurgitation, paralleling all thrasher experience at this place.

A little later when Neo was again off I gave him worms (meal worms) all of which he ate himself, again paralleling the thrasher practice of not giving these worms to their young until they have been fed (a day or so?) on other things that are smaller and perhaps without the hard chitinous covering.

Incubation eriod inde- erminate

It is 16 days from the laying of the first egg, but since I did not mark the eggs, it is not possible to determine which egg hatched.

Mar. 31st.

still rejects l-worms for brood.

At 9:20 A.M. N2 was on duty and Neo happened to be near, so I gave him meal-worms, all of which he ate and then began to search for other food. He got a small, dark-colored worm of some sort near me and headed for the nest. (He would not take a meal-worm there).

titude of and N2 to- rd each other at st.

Again the clucking by Neo and silent response by N2 with raised head and open bill. It looked as if she wanted to do the feeding herself, as often happened when Brownie carried food with his mate on the nest but Neo would not give her the worm and she got off. There were two young thrashers that raised their heads and I could see no egg; but there may have been one in the deep shade or obscured by the growth--also I have to look into this nest at an acute angle.

rd. egg one?

hody changes mind about mouse.

Rhody again appeared in the garden early and then disappeared. This time, however, he was back again by 10:30 working inside his nest. When he sailed down he ran by me with saucy wing flirtings and headed for the tool-house, occasionally waiting for me to catch up. However when I overtook him at the door, he flew up to the roof and climbed to the top of the observatory tower. I found he had already eaten his meat.

Just before this I had found Neo scripping about 30 yards from his nest and had given him worms, all of which he ate and then went off to the north-east. (Towards Inver's territory). Twice in the last two days he has been seen in company with another thrasher at or near the north fence, N2 being in the nest both times. No fighting was seen, but there was considerable scripping and running about.

A brief glimpse into the interior of the nest at 1 o'clock, at change of shift (Neo relieving N2 without bringing food) failed to reveal an egg--but I am still uncertain whether there is one there or not.

At 6:10 P.M. both birds were off the nest. I started to make an opening in the honeysuckle in order to get a clear view of the whole interior and two chicks raised their heads. I did not finish my task as N2, much disturbed, suddenly appeared scripping loudly and pecking pettishly at leaves and branches. Just like Nova. Also if one egg has been removed, that also is "just like Nova". The present standoffishness of this bird--beginning as incubation commenced--is also decidely Nova-esque. Once again: Maybe N2 is Nova.

Neo apparently heard what was going on, called once from the orchard, but did not come. I found him busily foraging on the bank. He came to me for worms on invitation, bringing some sort of winged insect with him. This he dropped and ate a worm, then his own capture, immediately resuming search nearby for more victims. He would interrupt this work whenever I offered another worm, but immediately resume his task. This happened 5 or 6 times. Finally, the last meal-worm was "prepared" (a la Brownie) and taken to the nest--but clearly he had preferred something else.

About 1 P.M. Rhody was hanging around keeping an eye on me near the cage--usually a "mouse wanted" symptom. So I got him one, which he refused. He now began to hunt for lizards close at hand. (The "symptoms" are plain: A rocky wall or bank; close inspection of crannies therein, accompanied by "shrug equivalents", i.e. quick partial opening of the wings) I left him at his task and came here, but was surprised to find that he had followed. I got the mouse for him again when he cried--purposely a small one--but he did not want it and resumed his lizard search, this time all about the rocks in the upper garden. I knew where there were lizards to be found: in the orchard; but he would not follow me there and finally went out the side gate. Later in the day he still refused mice and it was found that he had eaten meat at the cage twice again.

It would seem that mice were taboo for the time being; that lizards were on the preferred list; that he expected me to do something about it and, as the best I could do was to offer salamanders (which he also refused) he compromised upon meat. All of this suggests an accumulation of fur in his gizzard and an unconscious desire for something scaly to loosen it up!

Apr. April 1938.

Apr. 1st. (Sunrise 5:57, sunset 6:32).

It is fortunate for me that I was cautious about that third egg in the thrasher nest! Neo and N2 had an April Fool hoax prepared for me; for, at change of shift this morning at 9:30 A.M. (Neo taking meal-worms to the brood) a third, very wobbly, head joined the other two. All of the eggs hatched, and it is probable that the last one hatched this morning. It was in the near side of the nest, invisible until it raised its head. An egg at that place could easily be overlooked.

The first egg was laid on the 14th., the last on the 16th. The first hatched on the 30th.; the second on the 31st. and the third

very probably, within the last few hours. Hence the incubation period, with slight probability of error, was 16 days for each.

This successful outcome now compels me to retract one of the alleged stated resemblances between N2 and Nova.

At 8:30A.M. Rhody was perched in an acacia (A. floribunda) near his nest. He has never been seen there before. On invitation he sailed down and came to the tool-house for his mouse, but by a route several times as long as the one I took. This gave him an opportunity to cut a few more capers on the way to let off steam.

Meal-worms too large for [illegible] [illegible] Neo proves they are not.

Going back to Neo's acceptance of meal-worms for his brood: I find that they are too large for the youngsters, or at any rate, while I was watching Neo was unable to push them down the throat of any of the brood after trying each several times. He had prepared them on the ground just as Brownie did and took only two of the three given him. At 10:20 A.M. Neo has just succeeded in getting a whole worm down the gullet of one chick. I had been cutting worms in two for him; but he ate them all himself; so I gave him a whole worm, which he immediately took to the nest, where ~~he~~ one chick swallowed it with little difficulty after Neo had pushed it well down.

Neo leaves nest unattended to get food from me.

At 11:20 I looked into the nest (Neo there) and sat down 20 feet away. In a few seconds climbed up through the top of the honeysuckle and ran toward me with "blue-bird" calls. I gave him worms--two of which he ate. One was carried to the nest. In a few seconds he was back for more, taking another to the nest after extracting tribute. He had left the nest unattended. He now hovered the chicks. 10 minutes later the nest was unattended and Neo was seen running down the path. A call to him and he stopped, came back, ate two worms, took the third to the nest and remained there.

N2 objects to my presence, but finally capitulates, following Neo's example.

N2 was now heard scripping and soon mounted to a rose branch projecting above the honeysuckle 20 feet away, eyed me and continued to scrip monotonously as if objecting to my presence. This was true to her recent form; however, by being patient, I got her to see the light and come to within 6 or 8 feet of me and get two worms, which she prepared carefully and took to the nest, remaining there while N2 came out and got more worms from me which he ate himself.

First sign of Rhody's moult?

Meanwhile Rhody was flaunting about near the cage; so I went to see him. He paused near me, examined his feet, probing them with his bill, then scratched his neck, loosening a feather which floated away. First sign of the moult?

Further progress in N2's learning.

At 12:10 I looked into the nest: Both parents absent and no sound from either. I sat down a couple of yards from it and then saw that N2 was sitting quietly 4 or 5 feet from the nest, not apparently alarmed or resenting my presence. She probably also had seen me looking into the nest. I tossed worms below her and she got them and took them to the youngsters without any fuss about me.

Rhody not singing now.

Rhody did not sing during the day, in fact has not been heard to sing since the act was last recorded in these notes. He also was not seen to work on his nest. However, at 1:30 he was picking up (and dropping) twigs near his old nest by the livingroom window (No.) but wooh-wooed on seeing me and began his search for a lizard a yard or two from me. I moved to the path below the rocks that support the earth for the magnolia, hoping Rhody would follow, as that is a good place for lizards and I wished to observe his technique. There was a lizard there sunning on a rock and, sure enough,

Still "lizard conscious".

hody's
unting
'by ear."

Rhody approached slowly in his search. When within two feet of the lizard it bolted into a crevice between rocks and Rhody, who could not have seen it, immediately halted and remained perfectly still, listening. The lizard was off to his right and a rock intervened, so there was no chance of his seeing it. He evidently was uncertain of its whereabouts. After about 5 minutes the lizard poked its head out of its hole. I could not hear it move (at 8 feet distance); but Rhody reacted at once by becoming tense, although he still could not see the reptile, and, as he made no move in its direction, no doubt he still did not know where it was. In the next 15 minutes the lizard stirred slightly 3 times; Rhody reacting each time as before and making no move toward it. He was hunting "by ear"; but was either indifferent about making a capture or was unable to determine the location of the quarry by sound alone. Archie, Terry and Rhody repeatedly have demonstrated ability to locate small creatures that were out of sight beneath the earth and with great precision. In such instances, presumably the insect, worm or whatever it was, made a more or less continuous sound unaware of the presence of an enemy, thus furnishing a reliable guide to its captor. In the present case, the lizard was aware of the bird's coming and was on its guard; hence moved but rarely and then only for an instant--just enough to make the bird aware of its existence nearby and renew its attention, but not enough to enable the bird to determine direction.

Rhody finally gave up, stretched and strolled away. I had heard the original rustle made by the lizard on its first short dash, but none of the later sounds.

The thrashers, now that all eggs have hatched, do not cover the young continuously, but may both be absent at the same time hunting; although such periods are relatively short and infrequent.

Apr. 2nd. and 3rd.

During this period the thrashers showed an increasing tendency--especially on the part of N2--to sit on the side of the nest, leaving the young birds exposed for short periods--presumably purposely, although the weather was no warmer than about 63° max. Even at temperatures much lower than this this practice was occasionally observed.

N2, since the instance recorded when she was excited by my presence at the nest, has not repeated, except in one instance when two of us were there at the same time (T.E.R). She remains cautious in approaching me for worms, but she does come and when she arrives, is bold enough to prepare the worms in my presence. Neo, on the other hand, will often run toward me when he sees me.

There are individual differences in the methods of the two birds in preparing the meal worms for their brood. Thus, the most conspicuous feature of Neo's treatment is to hold one worm at a time in his bill, tip his head back as if he were swallowing a sip of water and "crimp" the worm while his head is in that position; but N2's most individualistic action is to hold the worm against the ground and rub it there with rapid sidewise vibration of the tip of her bill: very suggestive of the young road-runners' rubbing the hair off of caterpillars. Both birds treat one worm at a time, lay it down, work on another and so forth, finally gathering up the lot. As yet neither has taken more than 3 or 4 to the nest at a trip. They probably will take more later. (Brownie--recollection only, unchecked; would take as many as 16).

Rhody, during this period, showed nothing radically new. He

did not sing, visited his nest rarely, was often with the magpies and kept himself pretty well informed of my goings and comings, looking me up when he felt like a mouse in case I failed to take the initiative. Once, when I was calling the thrashers, he appeared suddenly from nowhere and placed himself in position to catch worms tossed to him.

This now a time of comparatively little thrasher song, although Neo still goes off to the N.E. occasionally, presumably to exchange songs with Inver. Brokenwing is also singing much less, although I hear him occasionally.

After a dry spell, rain began falling slightly at 5 P.M.

Apr. 4th. (Sunrise 5:54, sunset 6:34).

Rainy morning. I did not go out to look up the birds until about 11 A.M. I found Rhody very sensibly ensconced in his house-nest in the peppermint gum tree and not hungry enough to pay much attention to me.

Both thrashers in nest,

I found Neo and N2 both in the nest at the same time giving a double dose of calories to the chicks, offsetting the effect of direct exposure to a persistent breeze from the south (52°), Neo on top. Curiously this is exactly the attitude assumed by [illegible] and Greenie once in similar weather (as recorded in [illegible] notes) [illegible] Greenie in the nest called loudly and B came and hovered her.

ite-throated arrow still here.

This bird is now just outside the window and has been seen every day since his presence was first noted. He feeds not only at this station but at all the others patronized by the other crowned sparrows. I have never seen more than one at a time.

ody takes cover to avoid rain.

It continued to rain all of the afternoon--sometimes very hard. At 11:30 Rhody was in his shelter under the old oak and was given a mouse, which he ate there. He was not seen to leave this shelter for about 4 hours, although he must have gone to the cage once for meat.

April 5th. to 10th., incl.

The morning of the 5th. dawned fair, and there has been no rain during this six day period.

The young thrashers, through the medium of their two parents, were given a huge feed of meal-worms early on the 5th. as compensation for the slender fare which I suppose they received on the 4th.

During this period there was an increasing concern shown by N2 at my presence near the nest, although she continued to get worms from me notwithstanding, even when objecting to my presence.

An odd feature of these occasions was Neo's reaction toward his mate's alarm calls. He would come to me for worms as usual, but stretch to his full height and look in different directions in an endeavor to locate the cause of the alarm, but never once at me, as if taking me for granted and not suspecting that I was at the bottom of it all. Neo has never shown any alarm on finding me at the nest, and curiously, N2 when in the nest, does not seem to resent my presence.

Neo continued to be the best provi~~ed~~der of food, perhaps because he comes to me with perfect freedom and gets more meal-worms as a consequence. (He even looks me up now). N2 does much more digging than Neo and evidences of her work are numerous.

Throughout this extended period of observations on the California Thrasher, reference has been made from time to their indifference to angle-worms comparatively speaking: Sometimes they eat them and sometimes not; also they occasionally give them to the nestlings, but more often refuse to take them. Once, in this same period N2 was seen carrying one of these worms and was tossed a meal-worm. She immediately dropped the angle-worm and took this and other meal-worms to the brood. Both she and Neo in coming to me for more worms passed over this angle-worm repeatedly and never, in fact, took it to the nest.

Neo was given many centipedes and wormlike salamanders. The centipedes were always attacked at the head end and taken to the youn The salamanders were beaten to death, their tails eaten by Neo and their bodies given to the chicks.

Except for these salamander tails, Neo, since the first day or two after the hatching of the first egg, ate none of my offerings of food except Hamburger; but even this he seldom touched until the youngsters were provided for. He gave them none of this meat. N2 also was not seen to offer anything I gave her.

The Argentine ants do not appear to have been affected by the long rainy spell. They were seen constantly. More than once Neo when coming to take worms from hand has had these ants crawling on him. They may be seen crawling up his legs and once one got into his eye and caused him to run about frantically trying to get rid of it. After this was accomplished the eye seemed to pain him for several minutes . (Formic acid?)

As the youngsters grow larger the parents take more meal-worm at a time and make more frequent trips. Neo may carry as many as a dozen at once and make 5 or 6 trips in succession.

The youngsters are left uncovered for longer periods and also left unattended longer. Also the parents are tending more to sit on the rims of the nests and stare down at the brood. It does not seem as if they were guarding them from external dangers, but were watching them like physicians. I think that two of the motives are:(a) watching for Argentine ants and (b) watching for the young to excrete, when the faeces will then be swallowed by the parents.

On the 9th. Neo made an attack upon Rhody, who was in the driveway about 30 feet from the nest, and drove him away 4 or 5 yards then desisted, R not retaliating.

Other birds have observed the thrashers' good fortune in having me as a supplier of worms and two goldencrowned sparrows, one female spotted towhee and one brown towhee, hang around me when I am seated near the feeding place and come for worms, but do not take them from hand.

Thrasher song increased in frequency and volume, especially toward the end of this period, in this immediate vicinity. This seems to have been more or less initiated by Inver (?) who has recently taken to singing close to the boundaries of this property and Neo has responded. Once three thrashers were seen by Julio near the nest.

During this period Rhody's nesting activities may be said to have practically ceased as far as construction is concerned, but he has sat in it quietly fairly often and for periods of perhaps an hour at a time. His interest in the magpies (who are building a nest both birds carrying twigs, mud and lining) has increased. The female has, within the last two or three days, begun to make her almost incessant call, heard only during the mating season. There can be no doubt whatever that Rhody is attracted by this call and responds to it. Many times, during this 6 day period, I have been with Rhody 20 to 50 yards from the cage and he has run there swiftly on hearing the call. When there his interest has been concentrated most often

upon Kack, the hen, as determined by observing that he follows he movements by turning his head to watch her especially. On the tenth, up to 4 P.M. (when I left for the afternoon) he was constantly in and out of the cage, spending, I should say, at least half of the time inside. This appears to be a case of a male bird of one species recognizing "femaleness" in a bird of another species. It should be stated that the male magpie does not give this call at all.

Rhody, on two more occasions was seen to shed soft feathers and again it looks as if the moult had begun.

hody's sense
f taste.

In the past four years Rhody had been seen to make "tasting" movements of bill and tongue many times and on occasions when the circumstances connected with the act would seem to have called for the bringing into action of the sense of taste. Occasionally a worm is dug up during gardening operations that looks like a rather large meal-worm. One of these was given him and he picked it up only to lay it down quickly and begin "tasting" and trying to get rid of the taste--"smacking his lips" and wiping his bill on the ground and surroundings, shaking his head slightly, abandoning the worm for good and all.

During this period he was heard to give his song once only. He continued his display with mice, but seldom took them to the mirror. Sometimes they were taken to this roof and the Scamells'. Once his wooh, wooh, wo-o-o-o was heard coming from the fireplace behind me and he was found sitting on the chimney top.

His tendency to look me up when he wanted a mouse increased.

April 11th. (Sunrise 5:42, sunset 6:41).

(Note written at 2:15 P.M.).

At 7:15 Rhody was in his nest 1-38 and up till now has centered practically all of his attention on it and on things connected with it. He has visited the magpies only once, but he has had two episodes with Neo, has sat in his nest for perhaps three quarters of the time and has done more work on it than has been observed in the week preceeding. Today it is "all nest". Yesterday it was"all magpie". He seems today to have regarded his nest as something which now requires him, if not actually in it or working on it, at least to stay near.

His work has been confined to adding lining material; once for the first time observed, taking up a piece of cotton batting as large as my hand.

About 10 A.M. I was standing near the nest tree with Rhody at a higher level almost at my elbow, when he saw Neo coming toward me for worms. He crouched fully extended upon the ground like a cat and suddenly made a dash at Neo, who fled, rapidly being overtaken by Rhody. Neo had no chance in straight forward flight (running) and dodged into the bushes where Rhody followed and there was a whirling vortex for a few moments, Neo successfully evading the roadrunner by superiority in dodging and doubling. Naturally I put a stop to this. Rhody returned to his nest and Neo, after a few minutes came to me for worms.

A half hour later I was sitting near the thrasher nest giving Neo worms and Rhody came. Neo flew up into a tree and suddenly dropped down on to Rhody's back and off again, R starting to run at first but turning quickly upon Neo and chasinh him as before. This time both birds took to the air and went over the fence, then came back again, Neo having the superior agility on the short turns and through the bushes. I stopped this also. Rhody returned to his nest.

A little later he picked up some rope yarn that I have distributed for the birds, but dropped it and began tasting again. This rope had been slightly tarred on the outside, but I had used only

those inner portions that showed little evidence of the presence of tar. I examined the rejected piece, but could see only a slight darkening at one point and there was little, if any, odor of tar perceptible to me; although the rope was smelly of something else.

During the rest of the day Rhody gave most of his attention to the nest; he was satisfied with only one mouse.

April 12th.

This was another day of "nest consciousness" on the part of Rhody. I judge he sat in it as much as he would have done had he been doing his share of incubation, and it may be that his instincts tell him that he should be doing just that.

During the forenoon he was especially bright and animated when out of the nest and seemed to want some particular kind of material for nest lining. In search of it, whatever it was, he ran from place to place examining many kinds of things rejecting, after picking them up and sometimes carrying them some distance toward the nest: Felted azalea roots, rope fibre, cotton batting, even his favored composite weed, pine needles and miscellaneous trash. At last he pulled something out from the base of a baccharis bush that he took to the nest. It proved to be dried stalks of that mesembryanthemum that nurserymen and florists sell under the name of

During the forenoon he wanted no mice, but seemed to seek my presence and was eager for worms. He was also inclined to cut up didoes and once, when he had just entered the cage after carrying a piece of cotton about 75 yards on a dead run, he came out, ran directly toward me at high speed, spread his wings when ten feet from me and sailed exactly over my head almost touching my hat, and landed 20 feet behind me. It developed that he wanted to go to the nest in a hurry and I was directly in his path. He has never done this act before.

At 12:30 he was ready for his mouse, but wanted no more thereafter, although he accompanied me to the tool-house and inspected my offerings only to turn away disinterestedly. At 5:30 he was again in his nest 1-38, but, as usual, did not sleep there. (But see below).

The thrashers progressively extend their periods of absence from the nest, although they may sit not far away doing little. It looks as if they were purposely "weaning" the youngsters. While they seldom fail to come to me for worms when invited, they are showing that there is a limit to the amount of food they will give the chicks, and Neo is now eating some of the worms given him. Curiously, although he and N2 are getting worms primarily for the purpose of feeding the young, Neo still insists upon getting all the worms if he can.

April 13th.

Rhody is moulting. Not only are his feathers being found at places about the garden where there were none previously, but they are seen dropping off of him.

The news about Rhody today is that, at last, he has been seen occupying his nest 1-38 in his new house at night. As it is difficult to be absolutely certain of his presence there when he is sitting very low in the nest, a check was made by observing that he was absent from his regular place on the west lot.

All three thrasher chicks are still in the nest.

April 14th.

N2 is lame.

Little in the way of new developments today, but N2 has gone lame and:

hody again sleeps
n new
ouse.

Rhody again slept in his new nest-house in the peppermint gum tree. Twice. also, he accepted large mice with ritual, only to abandon them eventually, but taking smaller ones when offered and eating them after carrying them about.

April 15th.

hody's FOURTH
nnivers-
ry.

This is the fourth anniversary of Rhody's arrival at this place, finding him still mateless, but apparently content to make this his home.

At 7 A.M. I found him still in his new house, not caring to come down.

The presence of three chicks in the thrasher nest was confirmed. At this time Neo and Inver (?) were exchanging songs near the cage, but Neo came for worms when called.

At 8 A.M. the two thrashers were still at it in the same location, but Neo stopped singing on observing my approach to the nest and was next seen being chased right to my feet by Rhody, who seemed satisfied with that result and began picking up pine needles which he took to his nest. The impression gained was that Rhody did not want Neo near his nest and that was the direction from which they came.

At 8:15 I left for the day, returning at 5:05 P.M. When I left Neo and Inver were in the pine by the cage, both singing. On returning I was advised by Julio that Rhody had not been seen by him since early in the forenoon although he had looked for him.

All thrasher chicks
till in
est.

After verifying the continued presence of three young thrashers in their nest, I went down to Rhody's old house and found him in it. He cried when talked to, but did not come down while I was there, although I expected him to, and about 6 A.M., Julio found him in his new house and gave him a mouse.

April 16th.

At 7 A.M. (Julio) all three young thrashers were still in the nest and Rhody was out of his but present in the garden.

At about 10 A.M. I gave worms to Neo, all of which he ate himself.

At 10:45 the first yip or kip of the young thrasher out of its nest was first heard in connection with this nest. (This call has never been heard here from a chick in the nest as far as I can recall at present). N2 was in the nest at this time; Neo was in a tree overhead singing very softly. N2 came off and I gave her a good load of worms which she took to the chick that had left the nest and was in the honeysuckle 5 or 6 feet from it. There were still two chicks in the nest. At about 11 o'clock Neo fed these two and hovered them.

At about 11:20 N2 was in the nest. When she left I could see no chicks in the nest, but could hear two outside. Neo now came for worms, which he took to the nest, perched on its edge and looked down into it, clucking as he does to attract the attention of a chick to food. I could see nothing in the nest; but it was

rather dark in there and I could not be certain that it was empty. Neo now dropped the worms into the nest, but soon picked them out again one at a time and ate them. He now began probing inside it with his bill, but picked up nothing, so, although I could not see for certain, it seemed probable that there were no Argentine ants there, at least in considerable numbers. Neo seemed unable to realize that the nest was empty and got into it as if incubating. In a few seconds he was out and I forced a clear space through the honeysuckle so that I could get a good view of the interior of the nest at arm's length. It was empty. Neo came back and sat on the edge of the nest close to my hand, showing no fear, and gazed down into the nest as if unable to comprehend the new order of things. He then entered the nest and was sitting in it when I left to make this note.

12:20. I went to see ~~that~~ the thrashers at about 12 M. N2 was scripping in the bushes; Neo was in an oak sitting quietly as if overcome by the turn of events. I held worms up to him, but he merely cocked and eye down at them and resumed his thoughtful pose.

I now went to the place at the sage patch where he has been most ready to take worms from hand, in order to see if that would change his attitude. He came quickly, ate worms hesitatingly, seeming uncertain what to do when he had had enough for himself. However he gathered a billful and, as anticipated, took them to the nest, offered them there with cluckings, dropping them in as before, following up by eating them all! As yet he has apparently been unable to adjust his actions to the new situation. So far he has not been seen to pay any attention to the brood. Certainly he must know where each is, although they are anything but noisy. One of them is in plain sight in the honeysuckle not over ten feet from where Neo got the worms from me and 15 feet from the nest.

From the beginning I have suspected that Neo is a yearling--for many reasons. He has always seemed unsophisticated. I am now inclined to the belief that he is now having his first experience in rearing a family. N2o, on the other hand, I have considered as a veteran (Perhaps Nova) and she has been attending the chicks since they left the nest assiduously.

3:12 P.M. Since the foregoing note I have visited the nest area frequently, not seeing Neo until 2:58, when he came for worms. I had heard him making inarticulate sounds from the sage patch, but he would not come out. N2 had been doing all the work.

At 2:58 he took the worms and went to the nest again, repeating precisely his former actions, although the youngsters (at least two of them) were close by in the honeysuckle. He did not seem able to understand what had become of his children.

At 3 P.M. he came to me for more and again headed for the nest, but did not go there. He came back through the hole, returned, and so forth two or three times. At last he began to walk along the fence looking up into the vines and located a chick, which he then fed--the first instance observed since they left the nest.

In the meantime, about 2 P.M., Rhody was seen running down the street with nesting material. I followed him to Tree 8 (See map page 1313 A). He placed the twig in his old nest there, which he has never forgotten and never completed. He had already enlarged it to twice its former diameter and, for the next half hour, worked on it rapidly and was still at it when I left. I stood inside the canopy of the tree (which reaches to the ground so that it is like a green tent inside) and he gathered twigs both from the ground and from the tree itself passing about 4 feet from my face each trip and

showing no sign of being aware of my presence, except when I purposely attracted his attention. He wanted no worms and no assistance, but worked on in single minded concentration at the rate of one or two twigs per minute. This is evidently now Nest 2--38 (besides nest something or other for preceding years). This also looks like his second "harmonic"of the season. The nest probably also accounts for Julio's not seeing him yesterday.

He came up to the house for a mouse at 5:30 P.M. and carried it to the Scamells' to display it at the bright surfaces of an automobile there and then to his old house after 6 P.M. At 7:15 he was still there; so he has changed his mind again.

Neo was not seen to feed the chicks again until about 4 P.M. and then only with worms furnished by me. He had been spending most of his time up in an oak apparently doing nothing. When he resumed feeding it was observed that he occasionally pecked a chick; once hard enough to make it squall. All three youngsters were within 25 feet of the nest and called only at rare intervals and showed little inclination to wander. When one was seen to go down to the ground and start to walk away Neo pecked it and turned it back.

April 17th. (Sunrise 5:33, sunset 6:47).

Thrasher affairs proceeded normally, all young birds being accounted for. Neo now realizes his obligations to his brood and does his part in feeding. Between times he is inclined to sit in a tree nearby and sing. It was a warmer day than we have been having recently (76° max) and once he was so thirsty that he jumped into the water dish and drank deeply while there, with his breast and belly partly immersed. He now levies heavy tribute on worm transactions and, I should say, eats at least half of those given him for the brood.

Rhody's cerebral "vortex" seems to be on the whirl again. He was not to be found until, at 10 A.M., I heard him rattle-boo from the chimney top. Something off to the N.W. attracted his attention and he leaned far out gazing intently down into the valley below. He made a magnificent glide of about 200 yards to the lawn of the Morse home,perhaps 150 feet lower, and then disappeared and reappeared at intervals, apparently searching for something. In an hour and a half he entered the cage to watch the magpies, but soon came out, followed me to the tool-house, cried and was given a mouse, which he carried to the mirror with ceremony. But he abandoned it in less than ten minutes, went purposefully to the tree in which he built Nest No. 37 (not far from the cage) climbed up to the nest and began to repair it to the accompaniment of almost continuous whines. In ten minutes he came down, got a twig, looked up at the nest, turned away and ran off, put the twig down and trotted along the driveway north of the house, looking up into each tree as he passed it. In this way he eventually arrived at the foot of the tree containing Nest No. 37 by the south side of the living room bay widow. Here he gazed up at the nest, then reversed his course and climbed a tree by the north side of the same window. For about 15 minutes, crying all the while, he examined in detail every suitable location for a nest in that tree. This was carefully done. Each location was scrutinized above and below and on all sides, twigs here and there were pushed aside; some he attempted to pull off. At last he came down and I offered him the same mouse that he had previously abandoned (now dead) and he accepted it at once, according it full ritual as he carried it eventually, via the Scamalls' dining room window and front porch, to his old house in the west lot. When I arrived there he was sitting inside quietly with it in his bill,

greeting me with a wooh-woo-o-o-h followed by whines. I left him (12:30 P.M.) and do not whether he ate it or not.

I did not see him again until I found him in the magpie cage at 3:30. He came out at once and came directly to me and sat on a rock about 4 feet from me making what appeared to be an elaborate pretense of being interested in his feet and some flowers nearby (Lithospermum sp?) and the structural features of the rock, craning his neck and gazing at the objects first with one eye and then with the other, but really, I think,--although not looking directly at me--purposely keeping in touch with me--not wanting anything in particular but perhaps having an instinctive feeling that something to his benefit might develop from the association. After this situation held for several minutes I went part way to the tool-house to see if he had mouse in mind. That was not it--he stayed where he was until a sharper outcry than usual was emitted by the female magpie, when he dashed into the cage, only to come out in a minute or two and resume his place near me. I then gave him three or four worms, which he ate, but he was not really hungry. Once again he dashed into the cage at an outcry from the female magpie, again returning to me, waiting patiently for what I do not know. In a few minutes more he crouched low to the ground and began a slow stalk followed by a sudden dash at a Painted Lady butterfly, which he missed. Now followed a long period of sunning, ~~and~~ loafing and preening, interrupted at 4:30 P.M. by Julio's tossing him a salamander, which he received with bows, hroos and tail-waggings and then ate.

About 5:30 he saw me going in the direction of the tool-house fell in behind me and cried for a mouse. This given him, he carried it off (with ceremony) as if going to his old house in the west lot; but he abandoned it about 5:40 and stood in the path half way between the side gate and his house in the gum tree. He had to make a decision here--it was the logical place--between his two houses 150 (?) yards apart. The new house in the gum tree won and he entered it at 5:59 precisely. (Temp. 68°).

Now followed an action that astonished me and which is inexplicable--to me. It may be that I did not observe it correctly, but I do not think so. As he sttled himself in the nest he probed beneath his body and brought up a light gray, fluffy object, which at first I thought to be a mouse that he had abandoned there in pursuance of a recently formed habit of his. Going closer, I saw that it was a tuft of that grayish cotton batting which I had given him for lining. It was about one half as large as an average mouse I give him. He now raised his bill vertically and the cotton began to disappear. Soon, but only after some considerable effort, it had all gone down his throat! But he continued to make swallowing movements.

Now this behavior is entirely new in my experience. What was it? Perversion of appetite? Was it in any way associated with his recent abandonment-of-mice divergence from normal? Was it "medicine"--like a dog eating grass? Has he an accumulation of mouse fur which he wants to disgorge and he "thinks" that this additional bulk of roughage will help? (He has shown no recent signs of attempting to disgorge a pellet).

9 P.M. (64°) Rhody has elected to sleep in his new house in the gum tree--he is still there.

Incidentally he did not work on his 8-38 today--or any other nest as far as I know--which is another "unexpectidity".

April 18th.

Much thrasher song, first heard nearby west of the house at about 6 A.M., then shifting to the vicinity of the old oak.

At 8:15 I had been in the garden less than one minute when

Rhody came running from the direction of the tool house, anxious to attract my attention. Neo was singing from the old oak, lying down instead of standing up. It was pretty warm, 70°.

I knew what Rhody wanted so turned to the tool house with him at my heels. I gave him the mouse that he killed and abandoned yesterday at 5:40 P.M. He ate it at once without ceremony.

Neo maintained his position in the old oak, still singing, as I went to look up the young thrashers. He was not interested in my doings, but continued his sentry duty. N2 came, however, rather timidly and was given a cargo of worms which she took to a youngster then revealed to me for the first time. One that was yipping near me was ignored by her. I made no attempt to locate the third and left

Neo's song ceased about 9:15 and I went out assuming that he was no longer on guard and that he would be ready to feed the chicks; which was the case. He made 8 rapid trips between me and all three carrying huge billfuls of worms, exacting but slender tribute. He showed that one of them was practically at my elbow in the sage.

On leaving, Rhody again presented himself and began to gather nesting material all about me. At this place (near the old oak, in the driveway) within a radius of 75 feet more or less are:

4 of his old nests; Nest No.1-38; the thrasher nest and, at the moment, Neo, N2 and three young; the magpie cage; the glade and the old oak and the tool-house.

Rhody had his choice of several activities here and actually showed indecision, but when his mind was made up, ran at speed to nest 1-38 in the gum tree, where he deposited his burden: pine needles. So that nest is again in favor for the time being.

An hour later everything was quite in the area described and no thrashers, young or adult were to be seen or heard. Rhody, however, was coming from the cage wiping his bill and wandered down to the sage-patch, where he showed curiosity as to what might be in it, by trotting sidewise along its boundaries looking into it. N2 now showed that she was on guard by scripping loudly and descending to the lower branches of one of the oaks of the glade, probably prepared to defend the youngsters in the sage. Rhody crouched menacingly a couple of times, but ran on to his take-off point for 1-38, where he gathered pine needles and took them to the nest, then settled for a rest. N2 quieted down. Neo had not appeared. Clearly N2's watch; all peaceful, (75°).

During the rest of the day Rhody occupied his nest 1-38 for long periods. He was in it at 5 P.M. and remained there for the nigh This is an early retirement for this season.

April 19th.

Much the same as yesterday as to the birds.

Rhody again had a "domestic" day of it, sitting much in 1-38 and undertaking no new building operations as far as known. He again did not leave his nest after 5 P.M. In many respects an unpredictable creature. I lean to the view that this nest-sitting of his is really a carrying out of the part he would take in a normal reproductive cycle where he would have a mate, nest, eggs, chicks, all in proper sequence.

His nest is only about 20 or 25 yards from the thrashers' and

now that the young thrashers are becoming more mobile, though mostly still sedentary, the area which they occupy includes Rhody's nest tree and there is little doubt that he is well aware of their presence. They are not really safe with him about; but as yet, no overt act on his part that might be construed as inimical to them has been seen.

April 20th. (Overcast at sunrise).

All 5 thrashers and Rhody accounted for within an area having no dimension in excess of 25 yards, about 8 A.M.; Rhody "incubating" and one young thrasher about 30 feet from him up in a pine tree.

ody catches one the young [illegible]. We isagree"in principle".

11 A.M. Well, I find Rhody and I disagree as to the faunal balance of this area! Knowing that one never knows in advance what he would do under certain imagined conditions, I have often speculated as to how I would react toward Rhody if I should catch him molesting the thrashers; especially as these two species of birds are prime favorites of mine and such of them as have given me their friendship and confidence here have come to occupy a high place in my affections.

At 10:15 A.M. I went out to see if everything was all right, as I did not especially care for the situation . I found Rhody up on the orchard bank looking up into the bushes overhead and the adult thrashers scripping nearby. The implication was clear, so I picked up a stone as big as my fist and went up to Rhody. He rattle-booed impertinently and continued to stare upward. He then went up into the foliage and moved out toward the end of the limb and I got ready. There was a sudden rustling followed by screams and I let fly the stone so as to make a loud crashing sound about a foot from Rhody, who was only about 5 feet over my head. He flew out hastily with a young thrasher in his bill, dropping it in mid air. Neo and N2, as Rhody now started in pursuit of the young bird on the ground (apparently uninjured) joined me in instant chase and Rhody fled, rattle booing, as I stopped to watch the parents hard on his heels as he ran and dodged through the bushes and disappeared. Two brown towhees followed as spectators. Curiously, perhaps, I found myself only mildly annoyed with Rhody--maybe because now he was the one being attacked!

The chase quickly ended and surprisingly soon Rhody came sauntering back as casually as if the affair did not matter at all to him, and stood near me, calm and collected. The parent thrashers did not return at once and their scripping died out. Rhody showed some interest in the rose-bush on the fence under which the young bird had taken refuge and started in that direction. Perhaps he heard it. However, when I spoke to him sharply, he came back and stood quietly 4 or 5 feet from me and looked expectant; so, naturally, I started for the tool-house followed by him and gave him a mouse, hoping that this would take his mind off of the young thrasher. He carried the mouse to his nest and ate it about 10:45, and was "incubating" as I left to make this entry.

The little thrasher was then seated in plain sight in the rose, apparently unharmed and no longer frightened. Neo had returned, received worms from me; had fed the chick and both were working their way back toward the heart of their special area.

This affair, of course, was one such as doubtless forms a more or less regular event in the lives of birds and while their emotions are unquestionably stimulated to a high point at the time it would seem that little lasting impression of an emotional nature remains. Ordinarily, of course, such affairs are free of human intervention, and it is interesting to note in this case, none of the actors in any way appeared to have altered his attitude toward me after

the first excitement subsided, although my activities at one time certainly were not such as to inspire confidence in any of the participants, whatever side they may have favored.

At 12 P.M. Rhody was still in his nest; there were no thrasher sounds; none were in sight and, in response to call, Neo came out of the bushes to get worms for his offspring, from me.

I left about 1:30, returning at about 6 P.M., to find Rhody in his nest and all three young thrashers within 20 feet of theirs bright and cheerful. Neo came quickly to get worms fσr them.

ng catches one of
he young
hrashers.

10:20 P.M. Another episode! About 9:15 P.M. a boy and a girl from across the street came bringing me one of the young thrashers that had been caught and mauled by the dog Wally. The bird was gasping as if about to die. It has been placed in a cage warmed by thermostatically controlled light bulbs. I wonder if it is the same one that Rhody caught. The children witnessed the capture and rescued the bird from the dog's mouth. Even at that hour (about 9:10) the parents were fluttering about wildly "making a great racket". Thus their vigilance appears unceasing.

Of all the thrashers hatched at this place these are the only two known to have been captured by enemies (if we except Argentine ants). Strange that these two instances should have occurred on the same day.

April 21st.

The young thrasher survived the night and was found to have a compound fracture of the left tarsus close to the metatarsus and its lower mandible had been bent slightly downward. Otherwise it seemed to have suffered no injury.

Dr. Reynolds applied splints to the leg and an endeavor was made to adjust the foot in its proper position, but it is doubtful if it can be so maintained; so if the bird survives, it probably will have a crippled foot.

This youngster will not open its mouth for food and has to be hand fed. An experiment was made to see if Neo would take over the task and it was found that he would. I placed the cage on the ground by the sage patch and called Neo. When he came I gave him worms. He took these to the cage (4 feet from me); the youngster opened its bill, but would not advance to the wire, expecting its parent to do the rest as usual. This seemed to puzzle Neo, who ran about talking softly, carrying the worms. He fed the other chicks two or three times and returned frequently to the cage, at last succeeding in administering a full mouthful of worms. A few minutes later this was repeated. N2 then came, gathered worms, appeared to ignore the imprisoned chick and fed the others.

The cage was then removed to the house, for two reasons: One because it was not safe to leave it unattended and the other because the youngster got very excited when his parents were near and would not remain quiet.

Throughout the day hand-feeding continued.

Rhody continued to do his share of "incubation" and could be found in the nest at almost any time. In fact the only time I missed him there he came promptly from somewhere or other, was given a mouse and carried it to the nest.

I am satisfied that he is attempting to carry out his ordained part of the breeding cycle.

He is in the nest so much now that it is impossible to determine his "going to bed time" because it is not certain whether he goes to the nest to sleep or to incubate phantom eggs.

April 22nd.

At 7 A.M. the young thrasher was bright and comfortable, but had to be hand fed. The other two were still present in their area.

Rhody was on the job. About 8:30 he came down and followed for a mouse, carrying it about for 5 minutes or so with full ritual, then taking it to his nest.

rownie's and Neo's
itude toward their
young after being
parated. A contrast.

Brownie's attitude towards his own offspring when they were brought to his attention after a short period of separation or even when he saw them in a cage and had seen them being placed in it, differed entirely from Neo's as revealed thus far. Brownie would not feed them and was definitely hostile--in some instances, to the point of actually attacking them. (The notes will show this). A second test has not yet been made with Neo.

(Absent for most of the afternoon).

April 23rd.

The young thrasher was turned over to Donald Brock for re-adjustment of his bandages, as his foot had turned over sideways. He was returned this morning with foot now in proper position. He still has a tendency to gasp and his voice has been damaged apparently. There may be some amount of internal injury.

He seems to be as far advanced as his mates in the matter of feeding himself. He will now occasionally open his mouth for food and has only been forced once between about 11 A.M. and 3 P.M. He also has begun to peck at things and, as was observed in the case of the young thrasher that was nursed from Nov. 13th. to Dec. 21st. 1933 (hatched about Nov. 1st.) his judgment of distance is faulty and he always pecks short of his objective.

A second test was made to see if Neo would again feed him. Neo would pick up worms within 6 inches of him and eat them himself and feed the other youngsters but not the cripple. He therefore, reversed his attitude of yesterday, but was not hostile.

o fusses with
igs.

Neo has begun to interest himself in twigs again, so is considering a new nest in all probability.

4 P.M. Neo took a twig up into the honeysuckle about 40 feet from his nest. He was followed by one of the youngsters.

Rhody did somewhat less "incubation" today and was "off" of mice, although he took two, coming to the tool-house for them, displaying and carrying them a short time only to abandon them. The last one was taken at 6 P.M. He then went to his nest 1-38 for the night.

The young thrashers at liberty are beginning to follow Neo when he comes to me for worms. Their parents are not feeding them so often now and they are calling for food more frequently; but even then, they are mostly quiet.

The crippled chick did not need to be force-fed again, having accepted the inevitable, opening his mouth to receive the contents of the "gun" when he is hungry. Like the 1933 cripple above mentioned he is almost more eager for water than for food and was given it often with a medicine dropper.

April 24th.

The crippled youngster now accepts human beings as necessary features of his cosmos and recognizes them as purveyors of food and drink. Not once during the day did he refuse to "open up" when hungry or thirsty and he seems entirely devoid of fear of human beings. He has ceased to gasp--this partly, I believe, due to the fact that it is no longer necessary to hold him while he is being fed.

He seemed perfectly contented all day, up to sunset, lying quietly on his cloth most of the time, never trying to escape and not crying except occasionally when he saw somebody coming to feed him. About sunset he wanted to roost and tried to climb higher in his cage and began to call as young thrashers normally do when seeking a roost for the night. He was very restless and even covering the cage did not quiet him for several minutes: an unusual circumstance with wild birds, in my experience. Finally I placed two perches in his cage close together so that he could grasp one with his feet and rest the heel of his bandaged leg on the other. When placed on this, after he was really sleepy, he was contented. I had to place the toes of his broken member in proper position on the perch. This is expected to aid in preventing deformation of the foot.

The Brocks seem to have made a good job on this leg. It does not appear to hurt him and he actually scratches his head with that foot.

The lower mandible, I find, was nearly broken in two at mid-length and is twisted somewhat to one side; yet he uses his bill vigorously in preening.

He can not help himself to food or water; still pecks short of objects but is showing increasing interest in affairs--in fact is finding the world full of curious things.

When his dish of dry soft food was held up to him he began at once to dig in it with standard thrasher side-sweeps of his bill, but did not recognize the contents as food. He also likes to "dig" in his bed and pull the cloth.

When water is squirted into his drinking dish he watches curiously and tries to follow the individual drops with his eyes as each issues from the dropper and falls. This causes him to raise and lower his head so rapidly that the motion is almost vibratory. He then pecks at the drops and then at the water in the dish as long as its surface is disturbed.

He has not tried to sing as yet, but he occasionally "talks" to me when I do some of the things that interest him.

His nest mates outside do not seem further advanced than he.

Neo starts his second nest of the season and has it well advanced.

At 4 o'clock I watched Neo and found his new nest. It is 30 feet toward Rhody's nest from Neo's first one and 70 feet from the point where he took the twig yesterday. It is already a large, hollow bowl of coarse twigs ready (I think) for material of finer texture, but not lining. It is at the fence in a rose bush at about the height of my chin and right at the pathway. A fine place for me!

This nest has very little of the honeysuckle tangle to suppor it; hence it is of the standard thrasher type in its present stage.

I took down his old nest, which as I have said is of the "all lining" type (which thrashers affect when the nest is in a dense tangle where artificial foundation work is unnecessary) in order to examine it. The "standard" nest consists in general of three classes of materials: First, a platform and outer bowl of coarse twigs. Second an inner bowl of finer material which, in Brownie's nests, was largely composed of "ribbons" of soap root and shreds of bark, and Third: an inner lining of (here) soap-root fibre. This fibre is like that on the outside of a cocoanut. The ribbons eventually split up into

these fibres as they dry out. They form the covering of the bulb.

Examination of the old nest revealed almost no twigs at all. That is there was substantially none of the first class of material. The nest began with the second class, which in this case, consisted of narrow ribbons of the deciduous bark of the honeysuckle--very handy for Neo as he did not have to go far for material. And this explains why he was not conspicuously in evidence during construction. The lining was perhaps more than 99% soap-root fibre: the remainder being a few manila rope threads. The interstices of the lining were almost completely filled with sheaths of the chicks' pin feathers. It had not been fouled in the slightest and there were no ants in it.

These two nests of Neo's (and the two classes of nests in general) clearly illustrate the capacity of the thrasher to adapt his structure to the type of support available--immediately--without trial and error. (10:35 P.M. Horned owls hooting outside. Not so good!). The thrasher, therefore, has someplace in his makeup, either through inheritance or individual mentality, some attribute that enables him to predetermine the type of structure suitable to two different kinds of locations.

Except during the early part of the forenoon and at night, Rhody occupied his nest 1-38 little of the time. He gave the impression of searching for a location for a new nest. He does not appear to have done any more work on 2-38.

He refused to take either of the two mice that he killed and abandoned yesterday, waiting patiently until a live one was produced. This was received with full ritual, presentation at the magpie cage and the mirror and was finally eaten in nest 1-38.

April 25th.

Neo was working on his new nest at 7 A.M. and by 8 o'clock had done a surprising amount of construction. As thought yesterday, the rough work had been done --apparently all in one day--and he was using finer material exclusively. After 8 A.M. he fed the young birds faithfully with worms furnished by me and, as late as 10 A.M., was not seen to work again.

Rhody was in his nest at 7 A.M., but at 8 A.M. and up to 10, could not be located.

The swelling at the break in the lower mandible of the crippled thrasher has increased, resulting in forcing the tips farther apart. Otherwise he appears to be doing well--is bright and interested.

Rhody found me at 12 M. and had a mouse. He spent the rest of the day at home loafing. At 5:45 he was stowed away in his house in the peppermint gum.

Neo was not seen to work after 10 A.M., but sat in his nest occasionally.

The crippled thrasher again, about sunset, became restless and tried to find a higher place within his cage to roost for the night, calling. He subsided more quickly this time when covered.

April 26th.

Rhody was not in his nest at 7:20 A.M. and was found sitting on the bank of the Nichols' garden, looking off to the west. He cried on seeing me and responded to my invitation to come home and

have a mouse. Display followed.

hody reconstructs At 9 o'clock, after a search, I found him working on his
est 5-36/ old nest in the large oak near the cage, crying when I spoke to him. Soon he came down for more material and, at 11 A.M. was still busily engaged. This nest was 5-36 and, in 1937, was worked on again,
est 3-38. becoming 5-37. It now becomes 3-38. At this time last year he had worked on 8 nests. It is, of course, possible that he has done work elsewhere than here this year. He has visited other old nests this year, but has not been seen to work on them, hence not counted.

At 7:20 Julio was giving worms to Neo, who was feeding the two youngsters. One of these, after repeated efforts, managed to pick up and eat a worm.

Neo was sitting quietly in his nest about 8 A.M. He has added more lining and it could be made ready for occupancy quickly if he were to concentrate upon it. This he does not do. He still feeds his brood.

The crippled thrasher looks and acts well. Call "him" Percy. If"he"proves to be a female, it can be changed to Persis.

12 M. Rhody has worked continuously on 3-38, except for a little time off to attend to the magpies.

1 P.M. Rhody still working on 3-38.

1:05 Percy,the crippled young thrasher, has just discovered that it is not necessary to have water administered with a medicine dropper and was found drinking out of the water dish which has been raised to the height of his perch. He is fascinated by this discovery and , further, makes efforts to bathe in the tiny dish.

Shortly after this I left for the afternoon, returning about 5:30.P.M. Rhody was interviewing the magpies, but retired to his house in the gum tree before 5:45.

The crippled young thrasher looked and acted well, but all of his droppings for the day were green and he wanted no more food after his 5 o'clock feeding by Julio. About sunset he was a little restless, seeking a higher perch, but subsided when the cage was covered. At 10:15 P.M., howver, I heard him fluttering about again, so took him in my hands and he "asked" for food. He was given a small quantity, quieted down with comfortable gurgles and was restored to his perch, where he remained quietly.

April 27th.

"ercy" dies. About 6:20 A.M. he was "puffy", sleepy and dull,~~and~~ wanted no food and was on his bed on the floor of the cage. His fresh droppings were green. He was distinctly on the down grade. Perhaps last night's behavior was an indication (together with the green droppings of the day) of internal disorder of the digestive tract. His food was changed to custard entirely and it had to be administered by hand. I had to leave for the day, about 8 A.M. leaving the bird to Julio's care. Returning at about 7 P.M., I found him dead. J said he was alive but 10 minutes before, had been fed 4 times during the day, had shown no change in condition. All of his droppings were green.

Rhody was inspecting the magpies at 6:15 A.M., but followed me for his mouse, which he carried to the usual places with display.

April 28th.

Rainy morning with much thrashersong. About 8 A.M. there was a lot of confused thrasher song near the oval lawn and I went out to investigate. Neo and another thrasher were engaged in combat, Neo being the aggressor at the moment. The chase came to and ivy-covered bank which I faced and there, at eye level and less than ten feet from me, Neo got the other fellow down in the ivy and "gave him plenty". The invader retreated, perhaps largely through fear of me, as he had been doing fairly well before that, although losing. To be certain that Neo's opponent was not N2 and that this was not a mating affair, I had listened for signs of her presence and had heard her singing near the glade. I went there, found her and the two youngsters. Up till about 11 A.M. this other thrasher continued to remain on the property, but a considerable distance from Neo's inner territory. At one time it was accompanied by another bird. I was unable to see whether either was banded. (Trying to identify either with Okii or Chiisai).

Rhody, earlier in the morning, had been found by Julio under his roof under the old oak. Julio had asked him if he wanted a mouse and the bird had responded by leading the way to the tool house, where he was accommodated. I found him later in his house in the peppermint gum.

April 29th.

At 7:45 A.M. Rhody sailed down from the roof to land close to me and act very coyly; but he did not want a mouse.

Thrashers had been singing S.W. of the house. I found Neo, N2 by tree 8 in the west lot. Neo came for worms and took them into the brush. There were no evidences of thrashers in the vicinity of the nest; so they appear to have moved to the west lot.

10:30 A.M. About 10 o'clock Neo again fed his young in the brush by tree 8, then came back over the fence. I went to the sage patch near his two nests to see if he was still interested in the locality. I was surprised to have a young thrasher run toward me and accept worms just as Neo does. He seems to have tamed himself. Soon he began "silent talk" directed toward the fence and it was seen that Neo had returned, as hoped. He then joined Neo.

For the last day or two both thrashers appear to have forgotten about the new nest, which seemed to be complete for occupancy on the 27th. No "thinking" period has yet been observed in it.

10:45 A.M. Neo is now feeding the youngster that has stayed home with food not furnished by me. He therefore looks out for both, although they are now about 125 yards apart and N2 is with the one near tree 8. They have been out of the nest 13 days.

Later in the afternoon all four thrashers appeared to be in the tree 8 area, though one of the young birds may still have been in the original nest area.

Rain began to fall about 4:30 P.M. and Rhody, after having a mouse, retired for the night to his house in the eucalyptus. This seems to have been a clear instance of weather conditions (when his appetite was satisfied) inducing early retirement, and not his "incubating complex"; for the latter has been little in evidence during the past few days. His actual retirement was about 5 P.M.

At that time all the thrashers, with the possible exception of one chick, appeared to be in the brush neart tree 8. Neo got worms from me to feed at least one of them.

During the day there had been frequent song in that vicinity from more than one thrasher and Neo, more than once, was identified as one of the performers. There were no signs of combats.

April 30th. (Sunrise 5:16, sunset 6:59).

Rain during the night. Thrasher song at 5:30 A.M. About 7:30 A.M. all four thrashers were again back in their home area and Rhody had been given a mouse.

About 8:30 the thrasher scene had shifted to the tree 8 area again and I could find none at their old haunts. Neo came out on call and got worms for his young.

About 9:30 I went into the brush around tree 8 and Neo, proved tame in that environment, taking worms to one bird, but searching , apparently for the other one, ineffectively as he climbed about the bushes and trees, making his blue-bird call and uttering snatches of song for several minutes before finally taking the worms to the bird he had just fed. It was noted that he several times approached closely a brown towhee nest in tree 8 as if drawn to it by his feeding urge; but he turned back each time when one of the adults scolded. (One was in the nest).

About 10 A.M. I found him back in the nest area. When furnished with worms he fed one youngster there. (Returned or had he never left?). Neo was shortly back again in the tree 8 Area, again feeding one chick.; N2 present, as she had been all morning, but shy. I went back to the sage patch and one chick was still there. He is fairly self-reliant, flies, runs, digs and takes worms tossed to him like an adult.

At 1:30 he was still the sole occupant of the nest area and was given meal-worms and their pupae; the latter are less attractive to him than the worms and he has more difficulty in disposing of them.

6:05 P.M. Neo was responsive to call near tree 8 each of the three times I called there after 1:30 P.M. and took worms for the youngster in the brush . The lone one in the sage-home area responded an equal number of times in the same period. No ~~other~~ thrasher was seen to feed him during the day and he made no calls.

At 5:40 I went out to check up on the situation and found all thrashers in their home area. Neo answered vocally when I whistled, came, but ate the suet-seed "pudding" which is kept there, then carried a piece through the fence to a chick outside. As he went through the hole, the other chick came out of the sage, saw me, came at once and was given a good feed of worms. I went to the new nest, N2 was sitting in it quietly.

I turned toward the tool-house and met Rhody face to face in the path. He turned and followed, but merely admired my exhibit of mice and left for his gum-tree house, which he entered at 5:55, after merely glancing at one of the young thrashers on the ground within a couple of yards of him.

Neo was now seen in the path near the new nest. On call he ran to me carrying soap-root fibre, which he dropped and took worms for one of the chicks.

At 5:58 N2 was still in the nest. This is the first time she has been seen in it.

Since Neo has not been seen to add anything to the nest for several days, or even visit it, his sudden interest in lining material suggests that N2's presence in it, constitutes acceptance of it and furnished the stimulus that caused him to act as he did.

Neo was heard singing in the direction of the nest until nearly 7 o'clock.

Cloudy, chilly all day.

May 1st. 1938.

9:50 A.M. Up till now intermittent sun and cloud.

At 7:30 A.M. (Julio) All thrashers and Rhody home; N2 in the nest; Neo and the two young thrashers coming to him for worms.

Between that time and 9 A.M. Rhody, who took the initiative in showing the way to the tool-house four times, refused all mice offered--big, little, white, brown, black--each time finding it necessary to interrupt his contemplation of them by rushing to the magpie cage. At 9 A.M., when I went out, he lead the way part way to the tool-house and again decided in favor of the magpies.

I then found all the thrashers at home--N2 still in the nest. At 9:40 Neo and the two youngsters rushed toward me on seeing me; Neo insisting on doing all the feeding and treating the chicks impartially.

N2 now called in loud musical phrases for relief (I supposed) but Neo hung about me hoping for more worms. My supply was exhausted and I went for more. I hoped to witness the change of shift and discover if there were one egg; but when I looked at the nest, Neo was sitting solidly on top of N2 and showed no sign of leaving; so I came in to write this note.

[illegible]

At 10:05 Neo was incubating solidly, all alone. This means one egg, with little doubt.

earance of
irst brood.

These youngsters appear as large as their parents--in fact larger than Neo; perhaps on account of his bobbed tail. Their tails and bills are not of adult length as yet; but they are long enough so that they can not be distinguished from their parents by a casual glance. Already I have been fooled several times.

(I shall be absent the rest of the daylight hours).

On my return about 7:30 P.M. Julio had a written log of the day's happenings, which in substance was:

Confirmation of the presence of one egg in the nest;
Continuous incubation by the parents except for one 20 minute period from 1:40 to 2 when a third thrasher was present nearby, exciting all the birds, including the youngsters.
Continuous presence of the chicks in the vicinity of the nest and their being fed by both parents.

Rhody's refusal of mice in the morning, but coming to the dining-room window at noon looking for somebody to feed him, and his following to the tool-house and being rewarded.

May 2nd.

All peaceful in the thrasher world--the youngsters remaining in and about the sage patch all day and getting tamer; parents feeding them faithfully and incubating continuously--the bird on duty occasionally calling for relief and its mate responding. These calls are always phrases of full song. Sometimes the absent mate replies with song and then comes, and sometimes comes quietly without vocalization.

Rhody, after refusing all sizes and colors of mice, also meat between 7 A.M. and 8:30 (although he had followed to the tool-house each time) [illegible], about [illegible]:40, [illegible] the magpie cage on seeing me and ran with such speed toward me as to raise a dust (first time noted). He wanted a mouse instantly and was

accommodated at the tool-house. Full display followed via the cage, mirror and nest 5-36 (also 5-37). There it was eaten. He was not seen at all until 5:10 P.M., when he returned from the north, examined the status of the magpies, ignored me and went up to sit for a long time in 5-36, crying when spoken to. At 6:02 he entered his house in the eucalyptus. This house is now his favorite sleeping place. The nest in it (1-38) receives little of his attention at present. It may be that he has started another one and that was the cause of his long absence today.

May 3rd.

Rhody decided to stay home all day and had two mice. He was not seen to work on any nest, but sat for a time in 5-36, alias 5-37, alias 3-38, going to his house for the night at 5:50.

The young thrashers stayed home all day and were faithfully fed by their parents--principally Neo. There has been no sign of their parents being impatient of their presence and driving them away. Young thrashers are not importunate in the matter of soliciting food from their parents, anyway. They are well-mannered youngsters. These two handle their affairs now with professional skill. They recognize us as purveyors of food and frequently run to us for worms, which they are perfectly capable of eating without assistance, yet curiously, Neo, if present, prefers to pick up the worms himself and "hand" them to his children. They then cease all effort to get them themselves; sit down quietly in one spot and allow Neo to do all the fetching and carrying. He is willing to run his legs off for them. All they have to do when he is off duty and I am dispensing worms, is to open their mouths for a fraction of a second each time that Neo proffers a worm. They do not ask for it: No fluttering of wings; no calling. Their attitude seems to be that they are perfectly willing to pick up the worms themselves, but if their old man wants to butt in and take over the job it is just as well to humor him!

If Neo conforms to local thrasher tradition as established by Brownie and his consorts, these youngsters are due for a rude awakening before long.

May 4th.

The thrasher programme for the day at present (besides incubating faithfully) is to have the two youngsters remain in the vicinity of the nest (mostly in the sage patch) during the early morning, then take them to the area about tree 8 on the west lot for several hours and then bring them back home again for the late afternoon. All this time they are fed by one or other of the parents, principally [illegible], [illegible] regularly [illegible], [illegible] relies upon humanly provided food and is shy.

Rhody was not seen to work on any of his nests, but played with the magpies often; had one mouse and retired for the night at 5:58. He still does no singing.

May 5th.

The thrasher programme remained unchanged as described for yesterday. The young ones have been out of the nest 19 days and the parents have been incubating the new eggs 6 days, but feeding the first brood. Still no signs of the youngsters being driven away.

Rhody was not seen to work at any nest. He had 3 mice today and retired for the night at 6:30 P.M.--late for this season. He

seemed to take special pains to keep us aware of his presence and often hung around where I was working in the garden, even getting in the way when I was raking a bare spot in the lawn. I knew what he wanted, in spite of his air of elaborate disinterestedness; any move toward the tool-house (on three occasions) by me immediately caused him to drop his indifferent pose.

The magpies absorbed much of his time and he developed new strategy in his play with them. At the west end of the cage there is a wind-screen outside the wire, placed at an angle to it. From the top of this screen the magpies may be seen clearly when they are near that end of the cage. Also there is a crack where Rhody, when crouched behind the screen, can see them if they approach. He crouches behind the screen in tense, watchful attitude and when a magpie approaches the end of the cage, he suddenly jumps up to the top of the screen and confronts him like a jack-in-the-box, and sometimes boos at them. It seems to have little effect upon those birds, but Rhody seems to enjoy it.

May 6th.

Current programme of the thrashers remained unchanged. Now that the bills of the youngsters are getting longer and more curved and their mouths less wide, Neo (just like Brownie) is finding it easier to stick worms down their throats by approaching them by a flank movement and feeding from the side. At times he also still finds it necessary to tap a chick at several different points to make it "open up" and cluck.

Rhody was given his first mouse about 9:30 A.M., coming from his magpie play on seeing me approach. Ritual followed with exhibition at various reflecting surfaces and points of vantage. During this action, at one time, his voice could be heard issuing from the fire-place of this room. He also sang once--now a rare happening--and the first time since it was last recorded in the notes. At 10 A.M. he took the mouse to his house-nest in the eucalyptus, and frequent visits there showed that he remained in the nest for more than two and a half hours continuously--how much longer I do not know.

He visited the magpies often, using both his old and his new methods and was ready for another mouse at 4 P.M. This also was eventually carried to the nest 1-38. After more play with the magpies he retired for the night before 5:40 P.M. (Thought to be about 5:30). Note contrast with yesterday's time; yet both days were substantially alike as to weather, with maxima in the low seventies, clear, slight breeze.

May 7th. (Sunrise 5:08, sunset 7:05).

At 5 A.M. black-headed grosbeaks and russet-backed thrushes were singing in the garden.

At 7:15 Rhody was still (?) in his nest. He remained there until about 8:30. At 8:45 he followed me to the tool-house for a mouse, which he ate without ceremony.

At 7:15 N2 was incubating and, judged by the sounds, Neo and his charges were off to the east a considerable distance. At 8:30 Neo was on duty and the two youngsters were back at the sage patch and came to me for worms. Neo was calling at short intervals for relief. In about 15 minutes I went back; N2 was now in the nest and Neo and the youngsters were away again.

During the rest of the day thrasher programme was unchanged--the youngsters returning again in the late afternoon; Neo still feeding them and showing no intentions of driving them away.

Rhody could be found at home any time when looked for. It was a day of complete loafing for him. Between 10 A.M. and 4 P.M. he was seen in his nest everyttime I looked there, and that was often While I can not say that he did not leave the nest during that period, he was seen no other place, and I believe he was in the nest most, if not all, of that time. Weather conditions were as near perfect as could be wished. A little after 4 P.M. he came down and wanted a mouse, which he again ate without ceremony. Thereafter he occupied the next half hour or so by playing with the magpies and making frequent short trips between the cage and me--seeming to want something but not knowing himself what it was. When he wandered off to the Clearing spotted towhees were heard complaining there, so I went to investigate. He was sitting quietly on top of the small brush pile in which the towhees have a nest and was apparently unaware of theixr presence of the nest. I watched him closely to detect if possible any signs of such awareness on his part, but saw none. One parent remained in the nest; the other scolded nearby. At 5:15 Rhody left for his house in the eucalyptus, travelling in reverse his old route through the orchard. At 5:18 he was in bed.

May 8th.

Rhody was not seen between about 7 A.M. and 2 P.M. At 2 P.M. he suddenly sailed down from nest 3-38 and wanted a mouse. (I wonder if he had been camping there. I had looked there before without seeing him). The rest of the day he stayed home; bestowed much attention upon the magpies, and loafed. About 4:20 P.M. I again heard the spotted towhees complaining, again finding Rhody sitting on their brush heap, one bird scolding and the other in the nest. Again he seemed unaware of the nest; but I sat down and watched--until 5:15 in fact. At that time Rhody began to circumnavigate the brush pile, dusting and stretching. He then jumped squarely on top of the brush precisely above the nest 6 inches below! The towhee burst forth startling Rhody momentarily. He merely looked down casually--apparently saw nothing, then began strolling casually toward his house in the gum tree.

I thought he was on his way to bed, but he went to the magpie cage instead; played with them a while, then followed me to the tool-house, looked at my offerings, but accepted none. Back to the cage again; then, on coming out, walked toward his house a few steps, dusted, discovered a dried weed that looked like that composite he favors so much; picked it up; abandoned it and began gathering pine needles one at a time. I picked up the weed and smelled it. There was no aromatic odor. I picked up another dried weed which I knew to be the composite (for I had pulled it up myself a week ago when it was still growing) and found it aromatic. (Had he dropped the other because it did not smell "right"?).

After several minutes making careful selections he had a large billful of pine needles. He now bowed, hrooed and tail-wagged--to my surprise, for this ritual is never (?) devoted to nesting material. (There may have been one or two instances of it in four years, but if so, it is somewhere recorded in these notes). He took the load to nest 3-38 and there deposited it--a strange time to begin nesting operations for the day! He now sat quietly in the nest. When I spoke to the three thrashers (Neo and the two youngsters 50 feet away in the sage-patch, now home again) Rhody began to cry. (Not realizing the remarks were not intended for him!).

I tossed worms to the thrashers and Neo again did all the feeding, true to present form.

Further remarks addressed to Rhody in the nest brought forth soft wooh. wooh, woo-o-o-os. He came down at 6:20; had another look at the magpies and was in his house at 6:27. Nuttall sparrows and one russet-backed thrush watched his progress toward his resting place with signs of concern. The thrush followed at a safe distance making its alarm call, but finally singing its full song 20 feet from me, several times. (Incidentally this thrush sang frequently up to 7:[illegible] P.M.).

In the the two days: May 7th. and 8th. we have, climatically, two days precisely alike as judged by the human senses. Note, however, how radically Rhody's behavior on these two days differed; whereas the thrashers behaved strictly according to [illegible].

May 9th.

This day was almost completely devoted by Rhody to his new nest, 3-38. He was first seen working in it at 7:15 A.M., using lining. I tested him again on the known composite weed and the odorless one that he rejected yesterday. His first choice was the green composite. His next was of the rejected weed. Both were used in the nest. The dry composite was all used up during the day. I had it identified at the Herbarium of the University of California. It is: Gnaphalium decurrens, var. californicum, the California Everlasting.

His roosting time was about 6:25.

The thrashers varied their current programme slightly, in that the two youngsters remained at home more during the middle of the day. Neo, when present, insisted on giving the worms to them himself; but at times they did not respond readily and he had to tap them on head neck and back.

May 10th.

At 7:15 A.M. Rhody was in his nest 3-38, soon coming down to play with the magpies and get more lining.

The young thrashers were not seen. I left at 8 A.M., to return at noon.

The two youngsters were home when I returned, and came readily for worms. Neo saw what was afoot after a few minutes, and joined us. Again he insisted on doing all the feeding and, as I had the youngsters pretty well stuffed by that time, he had to resort to head tapping to get them to "open up." No chasing of the young has yet been seen.

hrasher song at
low ebb.

Thrasher song is now at very low ebb everywhere within hearing distance of this place and has been for several weeks.

Rhody worked a little on his nest 3-38 during the afternoon (lining), played much with the magpies, loafed a lot and was found in his house-nest in the eucalyptus about 6 P.M.

A flight feather from one of his wings was found today--the first found of the present moult, excepting contour feathers.

May 11th.

No considerable change in the Thrasher--Road-runner world today.

The young thrashers, except for shorter and less curved bills, look fully adult, yet Neo continues to spoil them when off duty by waiting on them hand and foot. Due to his short tail and many absent feathers he looks smaller than they(and he may really be smaller). They are perfectly capable, from all appearances, of taking care of themselves. Theydig, sweep leaves aside with professional skill, run and fly well and, today one of them was heard to scrip for the first time, being incited thereto by the similar, approaching call of the hen on her way to the nest.

It is observed that, when Neo is not at or near the nest, is the time when the youngsters are most apt to be absent also, and this rather confirms the impression which I have had for some time that it is Neo who leads them afield generally.

There is still no shadow boxing and no chasing--no sign of impatience with them by either parent; although it should be said that N2 is now rarely seen with them. In the case of this brood ther has been no tendency seen for the parents to divide the flock between them, as was observed with Brownie and his mates.

Rhody continued to do the same things as yesterday. He played with the magpies often, loafed, preened, hung around us, and had one mouse, rejecting one that he had killed the day before. He was found in his eucalyptus house at 6 P.M. He had done a little work (lining) nest 3-38.

May 12th. and 13th.

During this period there were again no changes of consequence in the thrasher-road-runner world.

Incubation of the thrashers continued regularly and Neo when off duty continued to feed his youngsters. These are now apt to be found any place about the premises, alone or together, and also on adjoining properties to the east, north and west. I have seen one of them make a good flight from the Nichols's place back to the top of the cage and, from there, glide down to the sage patch.

On the whole they are becoming more independent, but there is still no sign of their parents' driving them away. Neo still seems to give them more attention than N2 and, when they are away, he can often be heard apparently calling to them in musical phrases--perhaps at times when he has lost contact with them. However this may be, I have observed their respons to such calls from a considerable distance when Neo has been out of sight.

At about 7:30 A.M. on the 12th. Rhody was given a mouse. He was not seen again until 1:40 P.M., at which time he was climbing up to his house in the gum tree carrying a large lizard. He remained here the rest of the day, retiring at 5:58½ precisely. A warm day; temperatures running in the high seventies.

On the 13th. he stayed home as usual and played much with the magpies; had two mice; was seen to do no nesting and went to bed before 5:40 P.M. A warm day, like yesterday.

May 14th.

Heavy fog during the night. Rhody still (?) in his house at 7:30 A.M. 8:15 A.M. ditto. At 9 A.M., still foggy, he was just on his way up to his house again. At 10 A.M., still there.

gentine ants crawling on Neo in nest.

About 10 A.M., Neo incubating, it was noticed that Argentine ants were crawling about the nest and on him. He had one of his eyes closed because of an ant crawling around and on it. He made no attempt while I watched, to dislodge it, except to shake his head. I got two tins of ant poison to hang at the nest, but found N2 there on returning, so decided to wait for Neo to return before placing them, because I thought she would be frightened and leave the nest.

About 10:30 I found Neo in the nest with ants all over. At times they were in both of his eyes and he struggled to free himself of them and closed both eyes, but he would not leave the nest. I put both of the tins at the nest, although I did not expect them to afford him any relief. I brushed ants off of his bill with a camel's-hair brush, but he did not like the operation and bit the brush. He was much disturbed, but still would not desert the nest.

I then got a fly-spray, which although perhaps not fatal to ants, has been used on them and seems to make the surroundings at least distasteful to them for a considerable period. Returning with the apparatus, I found N2 on the nest. There were ants on her. She promptly decamped when I held the spray-gun near her, so I sprayed the outside of the nest and the surrounding growth. Owing to the density of the surrounding foliage and stems and their interlacing with everything in the vicinity, there is no feasible method of applying barriers of tangle-foot against the ants.

The spray caused the ants to disappear and N2 was back again shortly. Several visits during the rest of the day showed the occupants of the nest free of ants and quietly incubating.

There were three eggs in the nest, as was expected. As the first was laid on the first of May, if everything is normal and the incubating period is the same as in the case of the preceding nest, an egg should hatch on the ~~16th.~~ 17th.

The two youngsters were frequently seen during the day--one of them not looking very well--and were fed. They were home most of the time. At 6:10 P.M. I was giving them worms when Neo appeared and took over the job. It looks as if we were to have two broods here at the same time, and the parents may be faced with the decision as to whether they should continue to feed brood number one.

About 10 A.M. the sun began to come out. At about 10:30 Rhody was seen going back to his house, coming from the direction of the magpie cage. I do not know how long he remained in the house, but as he has not "incubated" there recently, it would seem that weather conditions were influencing his activities. From about 1 P.M. on he was about the place doing his usual things, but not nesting. He had one mouse and meat and at 5:55 I found him back in the house settled for good. He seems to have forgotten all about his first house in the oak on the west lot--or rather, as I do not think he has forgotten it, his preference at present is decidedly for the house in the gum tree. Further, he is practically never seen on the west lot and it is weeks since he has been at his post there. This corresponds with his established seasonal behavior.

A Nuttall White Crowned Sparrow, doubtless observing the results obtained by the thrashers, has suddenly followed their example and now comes to me for worms for her (?) brood now out of the nest. She will snatch worms from under the young thrashers' bills and then come and stand at my feet with a worm in her bill, chip and wait for me to drop her more. In two days this bird has become bolder and tamer than the young thrashers.

May 15th.

Cloudy most of the day, with only an occasional half-hour of sunshine.

Rhody was fairly closely observed and was only known to have left his house-nest in the eucalyptus tree four times in daylight hours and each time he went back again quickly. The first time, about 9:30 A.M., he chased other birds, including Neo, away from the vicinity of his house as he was about to follow me to the tool-house. Towhees started to follow in the trees overhead and he stopped, looked up and went after them. Neo happened to be up there too and was not overlooked. Rhody was satisfied when he caused them all to fly and then followed me. The mouse was displayed at various points, but in 7 minutes the bird was back in his nest. Two other times he came down for meat, returning quickly to his nest. A little after 6 P.M. he came down for a mouse. Is he "incubating" again, and if so, is that why he is so touchy about other birds near his nest?

The weakling of the two thrashers stayed home all day, never going far from the glade and the sage-patch. He is now a "soft" bird; dull and droopy, but with a great thirst--like the nest-mate that died in the cage. (Thirst a symptom?)

The parents were not seen to feed either chick today.

May 16th.

This was the day when we were to see whether Neo would feed his youngster with a fresh chick in the nest. He did feed the weakling, but, up to 7 P.M., none of the eggs had hatched--yet it is 16 days since the laying of the first egg. (No! It is only 15 days.)

The weakling does not look any better. He is now inclined to stand in the open, drooping, with eyes closed. He disgorges meal worms from 5 minutes to 20 minutes after they are first swallowed and usually picks them up again, but sometimes goes off and leaves them and may hunt for more food notwithstanding. Both he and his nestmate are very fond of the soft-food in the dish (as is also Neo). This perhaps makes them thirsty; but there is a strong contrast in this respect between the two. Weakling also likes to stand in the water-dish (feverish?) someties wading around and some times bathing. He has now begun to call oftener--like a chick just from the nest--and twice he made a rather adult three-syllabled, rich call when he heard Neo near. His soliciting for food is now more frequent than when he left the nest.

At 5 P.M. Neo fed him with meal-worms. Between that time and 6 o'clock he had "recycled" them several times, having had several "meals" of the same worms; yet he dug, came to me for more and so forth until Neo came out of the nest at 6 P.M. and seemed to take charge of him--judged by the sounds.

Rhody's new tactics.

Several times during the past week when Rhody has been with me and Julio has approached us, Rhody has crouched low to the ground and sneaked, while in that posture, into the bushes or kept his distance from us "crawling around on his belly." The first time I noticed it I asked Julio if he had been teasing or abusing Rhody, as the bird seemed frightened. J said he had not and I have no reason to doubt his word, particularly as he is extremely fond of the bird and is good to him.* J was rather hurt at my suggesting that Rhody had now , for some reason ot other, become afraid of him and on one occasion when Rhody had started this act again, Julio started for the tool-house immediately followed by the bird, who got his mouse! No act of fear there.

* Qualify this. See middle next page.

This morning I heard Julio talking to Rhody near the sage-patch, out of my sight for the moment, and heard, several times repeated, a peculiar duck-like sound--not a quack--so went to investigate. Rhody was again crawling around near Julio, in and out of the bushes and making this (new?) sound, keeping about 10 to 20 feet from Julio. He soon went through the glade in the general direction of the tool-house but stopped part way. J now went to fish out a mouse for him and Rhody followed to the tool-house, still with his peculiar sneaking gate and side excursions and again making that wanhk sound on arriving. To me, he looked frightened, yet he took the mouse and darted off with it, eating it quickly. This somewhat nazalized wakh is like that of the young road-runners, Archie and Terry, but with the "nazalization" stronger--if my recollection serves. I do not now recall having heard Rhody use it before--certainly not for a long time. If I have, it will be in the notes somewhere--perhaps about the time he was beginning to take cognisance of A and T in the cage.

I cross-examined Julio, who did not seem surprised by the occurrence at all. He said that that is the way Rhody "talks" to him and that he has been doing it for "oh, about two weeks when I give him a mouse". The whole thing is puzzling to me.

Later in the day when I met him on the way to his nest, he turned about and [illegible] directly, [illegible] him with no fancy business whatever and got his mouse with bows, hroos and tail-wags; ultimately taking it to his house-nest in the gum tree. (About 5 P.M.). Sometime between then and 7 P.M. he had come down again for meat at the cage.

This was a day of much house nest occupancy by him, but not so much as yesterday. He also again cleared the region about his nest of towhees and this time included a rabbit in his activities.

It is difficult for me to free my mind of the thought of the element of fear in this peculiar, new behavior of Rhody's. It will bear watching. Referring now to the footnote on preceding page: J is an Asiatic. It is not impossible that his conception of kindness to animals differs from ours; but I have never seen the slightest indication of any tendency for him to be anything but gentle with all birds. He will put himself to a great deal of trouble to help them when ailing. Yet a squirt with a garden hose or a sudden boo might be enough to make Rhody fear him and at the same time, regard him as a useful citizen in the matter of comestibles and be willing to subject himself to minor hazard when mice are in prospect.

May 17th.

Bright, sunny morning, unlike yesterday. [illegible] thrasher nest, Neo was incubating and N2 was scripping off to the north. The two youngsters were not in sight. (7 A.M.).

I heard Neo come from the nest, so went to look. One Chick after 16 days elapsed time of incubation from the laying of the first egg. Neo evidently saw me going back to the nest, so he returned without any fuss and settled upon my hand still in the nest, rubbing himself firmly down upon it as if it were to be treated like "any other" egg. He was perfectly calm about it and was not disturbed when my hand was withdrawn.

At 8 A.M. Rhody came down from his house to warm his back.

The stronger thrasher was seen.

At 8:20, guided by his adolescent call (not the yip) Weak was located in the upper garden, looking no worse for his night out. He came to me for a few worms, three being enough.

eo's first brood
s "manes".

I overlooked recording that the three youngsters of this first brood of Neo's all have the "manes" noted in the case of a few young thrashers.

First brood out of nest 32 days.

I left about 9 A.M., returning at 1 P.M., and looked up the thrashers at once. Both young birds were near the N.E. corner and wandered over to me to get worms. Those for Weak had their heads removed and were also cut into two or three pieces. I thought that, as he seems to have been unable to crush the worms in his bill enough to kill them, perhaps the clawing of their feet might have induced vomiting in his weakened condition, and the tough heads were probably more or less indigestible as well; further if he has a sense of taste, the "custard" that exudes from the cut ends might prove attractive; still further, the cut worms might give up their insides even though he might be unable to digest the skins. He seemed to appreciate the change and began to reach for the pieces and take them (a first for him) from my fingers.

Neo feeds first brood after 2nd. begins to hatch.

Neo hove in sight while this was going on and both youngsters deserted me promptly and went to him and he fed them; so then, he will feed the old brood after the new one (or one of them) has arrived. They have been out of the nest 32 days.

Shortly after this both were again fed in another spot by me. This time Rhody "butted in" and had to be prevented from interfering with the young birds. For a weakling Weak covers a surprising amount of ground within the garden.

6 P.M. Weak was given beheaded worms several times again during the afternoon; each time coming to take them from the fingers. He has not been seen to disgorge worms since he was first fed this morning.

Again Rhody butted in upon one of these events and had to be driven off. He is so sure of his welcome, however, and our good faith, that he does not take these repulses seriously to heart.

6:30 P.M. Weak, after running away down to the gate when he caught sight of me just now, changed his mind and climbed a bank to reach me; again taking cut-up worms from hand.

Ants have not again invaded the nest,

The treatment given the thrasher nest to repel ants has proved effective so far. Not one has been seen in the sprayed area since the work was done.

A difficult time for the first brood.

Aside from sickness and enemies this is a difficult time for the two young birds of Neo's first brood, as, while Neo does feed them, as recorded, his action is more or less perfunctory (when they obtrude themselves upon his attention) and not now one of his major functions. For several days--even before the arrival of the first one of his second brood of the year--they have been compelled to get most of their food without his assistance and that of his mate. Naturally, also, as one of the parents is on the nest all of the time, they have been, whether intentionally or not, restricted in food supply.

Rhody has been neglecting his nest 3-38 the last few days and 1-38 (in his house) has been receiving all his attention; mostly by merely sitting in it. However, once today, when he followed me to the tool-house, he suddenly caught sight of a mouse nest that I had laid on a bed of "myrtle" (Vinca minor) for the use of various birds in their nesting operations, picked it up and carried it quickly to his house-nest.

During my absence today, Julio says that Rhody again went through his new tactics (including the wankh) when offered a mouse.

May 18th.

Rhody was out of his house before 8 A.M.; but at 8 A.M., was back in it. At 9 A.M. he discovered me feeding Weak and came to investigate, sneaking through the sage to approach the young bird more closely. I made him desist, offering as blackmail, a mouse at the tool house. He followed me quickly, ate the mouse at once, then carried a sheaf of pine-needles to his gum-tree house. The killing of a mouse by Rhody is really mercifully performed. The mouse is taken by the back of the neck, pinched hard and, if necessary, slapped on the ground. As a general rule its struggles cease almost instantly and there is usually no voluntary movement after the first second or two. Even reflex movements are as a rule, all over in about 10 seconds from the time the mouse is taken.

[illegible] a mouse

Weak looks and acts about the same, but he does not at present vomit up worms that are cut up. Neither of the youngsters can be considered very proficient in handling meal worms.

Since they left the nest there has been one constant point of divergence in their superficial aspects, and that is in their tails. Weak's tail has been more compactly folded and is more "spiky". The other bird's tail tends to "part in the middle" and is spread more at the tip. Both have been present up to the time of this note (10 A.M.).

11:05. At 10:25 A.M. I went to the sage patch. The first thrasher to come was the stronger bird (Strong). He, for the first time, was seen to disgorge something; but he ate it again.

Weak was now seen behind me and given cut-up worms. Neo now came from the nest, relieved by N2. It was his manifest duty to feed the nestlings, but as mnay times recorded in these notes meal worms are not given to the nestlings by the parents when they are very young.

Neo was now confronted by a peculiar situation when I tossed him meal worms. He was being actively solicted by Weak and Strong; his duty was to feed the nestlings with something other than mealworms. He probably also was hungry himself, as he had been in the nest a long time. It was (by precedent established by Brownie, et al) past time when the juveniles should receive some discipline. Rhody, also, had just passed through the glade a few feet away like a comet, unsettling local affairs.

Neo was clearly confused, even after the mild excitement of Rhody's transit subsided. He apparently did not want the worms. (Too tough for the nestlings and not important that he should feed the juveniles). He picked up one or two and abandoned them. (Strange action of Neo). He ate one and left the rest and wandered about near me uncertainly, as if expecting something from me (More suitable food for the nestlings?). Solicitation by the youngsters continued. He fed one. The other he approached with a worm, then turned his back on it suddenly and displayed slightly and walked off stiff-leggedly two or three feet. He now picked up a few cut-up worms and ate them himself, then waited quietly near me, a few moments, then charged one of the youngsters (first time seen). This one faced him valiantly and "looked poison". Nothing happened for a few minutes, then a little more shadow-boxing with no blows landed. I got some ground-up meat. Neo and Strong ate it freely, but Weak refused it. Rhody now came bursting through the sage dispersing the gathering and chasing Neo a short distance. R retired to his house and the thrasher gathered again. Observations on them ceased.

Rhody seems to be getting more touchy about birds (and rabbits)in his immediate nest area. Perhaps also he is becoming more crabbed with age and disappointment in his love life. Anyway, he certainly is stirring up other birds more now than formerly, although this action seems to be confined to the immediate surroundigs of his house-nest in the gum tree--say not beyond a radius of 25 yards, more or less, with it as a center.

Maybe it is only his idea of fun.

12:15.Rhody has had another episode. He stalked one of the young thrashers for about 50 feet to the sage-patch and then left him in order to make a dash at Neo digging a few yards away. Neo fled at first, but suddenly turned and faced Rhody and flew into his face. R turned and ran into the glade, stopped three or four yards away, began to examine the ground while he was menaced by towhees and picked up half an eggshell only to drop it. This shell appeared to be from a thrasher egg. (See 4th. paragraph below).

Next Rhody gathered a sheaf of pine-needles and carried them to his house.

About 1:20 he was preening near the nest-tree 3-38 and I presented him with a Jerusalem cricket. This brought forth immediate full ritual: bows, tail-wags, hroos and also coot-coots, apparently for my benefit; for he directed it toward me at less than three feet distance, circumambulating me in the process. His crest was raised to the utmost and his skin-patch fully displayed. (The breast on this is still rather dull). The cricket was taken up to nest 3-36 and consumed. Work on the inside of the nest followed.

By 2 o'clock he was outside this window after searching t through the rhododendrons and azaleas flirting his wings in the "lizard gesture". Quail, brown towhees, spotted towhees, bushtits, a house wren were all disturbed by him. He searched in all corners of the court, looked into various windows opening into it and then came to stand near me to preen with elaborate show of unconsciousness of my presence. I knew what this meant; so went to the tool-house and verified my deductions. Meanwhile I had called Julio to come to me while R was with me, to see if the bird would perform his new act with wahnks, but he did not.

I should have stated that, when Rhody was in the glade portion of his 12:15 episode, he crouched and wahnked. This may have some significance when considered with his doing this for Julio.

Weak was given cut-up worms several times more during the afternoon and seemed somewhat improved.

(I shall be absent for several days).

May 19th. to 22nd., incl.

I got home about 9 P.M. on the 22nd. and learned from Julio that the two young thrashers had not been seen during my absence and that the thrasher nest had been robbed of its two young, one egg being left. Neo and N2 had deserted the nest and this place and had apparently gone to the east. Also the four young chicks in the nest of the lutescent warbler (just hatched) had also disappeared. Jays had been present and he had caught a large alligator lizard and a fair-sized gopher snake. Further, Rhody had pulled the tail out of a brown towhee! Quite enough!

J said, also, that Rhody had ceased to wankh and crawl when in his presence.

May 23rd.

Not a thrasher to be seen up to 11:15 A.M., but calling could be heard off to the east. At 11:15 Neo was near the sage-patch and responded to an invitation to come and have some worms. He was rather shy. He soon began to pick up and drop twigs and shortly disappeared while I was getting more worms. I suppose he is building (or contemplating building) a new nest somewhere.

Up to 2 P.M. Rhody had had two mice. The first one was taken only after he had refused (crying) two larger ones differing in size. Both mice taken were honored with ritual and taken to nest 1-38, where he spent most of the forenoon.

About 2:30 I invited him to come and look at the alligator lizard and the snake. Both of the creatures, at different times, brought forth his crawling behavior, with flirted wings. R was intensely interested for a time, but attacked neither. The snake was taken out of his cage and R circled about it. The snake had no difficulty in following R's movements with his head at upwards of 10 feet range. The snake was given a live mouse, which he immediately "constricted" and swallowed. Rhody had previously (Julio) dined off of the lizard's abandoned tail--a day or so ago.

At 5 o'clock he wanted another mouse and again exercised sharp discrimination as to size, preferring the smallest. He then went to his house and was not again seen out of it. A warm day, max. 78°.

Neo was seen back home again about 5 P.M. and appeared to be looking for a nest site.

May 24th. (Sunrise 4:53, sunset 7:19).

At about 7:45 A.M. Neo was home and fussing with a twig at the entrance. He dropped it and came to me for worms, but not very enthusiastically. He then called loudly from some place in the honeysuckle on the fence.

Rhody, about 8 A.M., was seen trotting toward his house-nest in the eucalyptus with a sheaf of pine needles. This day is beginning warm. (68).

Later in the day when Julio gave him a mouse, he again adopted his "crawling-wahnking tactics.

Still later, while he was preening on the ground near his house, the towhees who have a nest there, came (I suppose from their behavior) to decoy him away. It is their habit, as on this occasion, to place themselves deliberately on the ground in front of him--sometimes as close as three feet, and there seemingly awaiting results in a tense, quiescent attitude. If he charges, as he does not always do, they retreat behind a bush and there may be a short, dodging chase, the towhees always stopping when Rhody stops and resuming the waiting attitude a yard or two from him. If Rhody persists, they take to the trees and he usually abandons the pursuit; but he may (as in the present instance) tear off in one of his fits of exhibitionism with rattle-boos and posturings not apparently directed at the towhees. The towhees (Brown) are always the aggressors and if anything happens to them it is their fault! (They have 10 or so nests here now).

Rhody is strongly "addicted" to his home in the eucalyptus at present. It is his castle. From it he makes sorties for food

and "recreation", returning to it after very short absences, at present. Today the time spent in it far exceeded the time out.

Neo was seen at home once or twice and was called from the honeysuckle a few times. He also was seen picking up and dropping a twig again. There is a certain dome-like mass of honeysuckle and rose on the fence which he fancied greatly before he built his first nest and I really expected him to build there. It was in or near this place that he was heard calling.

May 25th.

At 7:30 A.M. Rhody was in his house; Neo and N8 (recently a comparative stranger) were in their old area.

At 8 A.M. Rhody had eaten his meat in the cage, was playing with the magpies, but came to the tool-house for a mouse. The one offered (a lively fawn colored hybrid) bit me so that the blood flowed freely. I dropped it, startled, and Rhody gave chase, dropping it himself several times, but eventually killing it quickly and gulping it down, returning at once to his house.

Neo now works on 3rd. nest.

About 8:30 I sat near the "dome" referred to above, and listened. I could hear faint sounds. I dropped worms and Neo came out and began gathering lining material, alternatingly eating the worms and gathering more material. He went up into the dome and I saw him in the dusky interior sitting in what looked like an almost completed nest; but I made no close investigation.

Neo is shabbier than ever and his stubby tail has become still more frayed.

9:30. Neo is now off calling. This is apparently the stage in nesting when the male (as so often witnessed here) seeks to secure the females acceptance of the structure as a place in which to lay eggs. As seen from the outside, the nest looks finished.

What causes sexual activities to be limited or extended in concord- with "two-brood specialization".

Normally the thrasher (here) is satisfied with two successful broods in a season, but, in the event of losing one or more, continues its efforts. Neo's second attempt was a failure; so he begins a third. Now what is it that causes reproductive activities to cease when two broods are successfully reared, but to be continued when the second is a failure? In other words, what attribute of the birds' (both birds) physiological or psychologic make-up operates to restrict or extend, as the case may be, their sexual activity in accordance with the requirement that there shall be two broods per season brought from the nest?

These three nests are in practically a straight line, spaced at 30 foot intervals.

At 10:20 Neo was calling nearer home. I found him in a tree near the sage patch and invited him down for worms. He accepted and then moved off a few feet and began to call in short, musical phrases looking keenly in various directions, and listening. He is still at it (10:35) and there can be little doubt that he is endeavoring to get his mate to return. (Or perhaps another mate?).

Rhody still in his house at the same time.

Neo, searching and calling for mate.

At 11:30 A.M., returning from an errand, I heard a thrasher singing short songs near Rhody's old house on the west lot. I parked the car, went to the edge of the thicket, called and Neo came out for worms, still calling for his mate. As I left he was

still searching and calling from the ground. By map this scales 190 yards from his new nest. The question naturally suggests itself as to whether, in the event of another female responding instead of N2, they would mate.

At 12:05 Neo was back again in his home area, coming through his regular passageway under the fence to eat soft food from the dish kept there. (About midway between his nests 1 and 3). After eating a worm contributed by me, he climbed a tree and called loudly once. There was instant response from the east. Neo's call was not repeated, but in a few minutes, there was low talk in the vicinity of the nest; so his search appears to have ended at home.

May 26th. and 27th.

During this period Neo was seen only once, and then he flew away when I appeared on the scene (27th.). Not another thrasher was seen at this place these two days and almost no song was heard, even in the distance, the exception being a few early calls (about sunrise) both days. Neo's third nest seems ready for occupancy, but from present indications, it looks as if it would not be used.

Rhody, during this period, showed no departure from recent routine: Almost continuous occupancy of his house-nest in the gum tree, with short periods of play with the magpies and coming for his mouse rations. He had two mice each of the days and one piece of meat. Sometimes he displayed with the mice and sometimes not. He did no singing and omitted his newly acquired "creep-and-wahnk" behavior in the presence of Julio.

His roosting time seemed to bear no relation to daylight hours or weather conditions, except that he was already in bed long before sunset and might get up any time.

He continued to show discrimination as to size of mouse taken.

May 28th.

9:45 A.M. No change as yet in thrasher situation.

Rhody was in bed at 7:45 and did not come down until about 9:15, when he came for a mouse, but rejected all offerings until I got a tiny one not quite so large as the end of my thumb. Larger ones he allowed to escape into crevices between rocks and watched interestedly while we tried to get them out, preening at the same time. Occasionally he would pretend to hunt for them, but instead of carrying his search to a logical conclusion, would come back to me and wait for another one. Finally he left for the cage, but when he saw me approaching with the small mouse in my hand, immediately flew down and ran to me for it, gobbling it at once. Apparently a clear case of "knowing" exactly what his food requirements of the moment were.

After disposing of this mouse Rhody was back in his house again in a few minutes. (Is this increasing domestication--assured food-supply, growing laziness, or a manifestation of old-age, or the reproductive instinct--incubation?). (On second thought: perhaps this is the mere automatic carrying out of what should be his normal behavior at this season, viz: doing his share of incubation).

About noon Rhody, someplace out of sight, saw me giving a mouse to the temporarily captive gopher snake (who "constricted" and ate it promptly) so presented himself as an additional candidate and was accommodated.

Not a thrasher was seen or heard by me during the day, though absence during most of the afternoon renders the observation incomplete.

May 29th.

Neo discover-
ed in nest

At 8 A.M., Rhody in his house; Julio watering the garden near thrasher nest No.3. J said he had seen no thrashers. I looked into the nest. Neo was sitting calmly in it! I had about decided that he had gone elsewhere for good. A hawk sailed by in leisurely fashion with a bird in its claws.

eginning of
egular incubation
ith changes
f shifts.

At 9 A.M. he was still in the nest.

At 9:30 N2 (or a bird with a long tail) was in. Incubation appears to have begun.

11:30, Neo in nest, and nest has been occupied continuously. It looks as if these birds had "put one over on me" and somehow or other have at least one egg "without warning".

During the rest of the day there was no time when a bird was not occupying the nest. Occasional calls for relief were heard.

Rhody continued his present form, the most conspicuous feature of which is almost continuous occupancy of his nest 1-38 in the house, with short absences for mice, play with magpies and sunning; temperatures (over 65) justifying use of the spread-eagle posture always followed by vigorous neck-scratching.

ody's moult.
(First tail
eathers).

Three days ago I found one of his rectrices--the first found of the season. When he was sunning today it was seen that he has lost two; the two outer ones, i.e., the outer one on each side. He displayed for only one of the two mice given him today. His "roosting time" could not be distinguished from his "incubation" period--he merely continued to stay in the nest.

ody makes error in
selecting
lining.

He conceived the idea today of using for nest-lining a spray of the fine leaves of the eucalyptus, which can be reached without leaving the nest; but he neglected to detach them from the tree! With great solemnity he pulled them into the house and carefully pressed them into the interior of the nest, but when he let go of them, the spring of the branch pulled them out again. He made a second attempt with the same result and then abandoned the effort. (Had he learned as quickly as this that it was futile, or was he too stupid to break them off?).

May 30th. and 31st.

During this period the thrashers continued incubation diligently. They are very quiet now and are seldom seen except in the nest, rarely coming for worms.

Rhody maintained his present preoccupation with his nest in the gum tree, as last recorded. He appears to be permanently in his house for the night before 6 A.M.; but, as stated, his "incubation" and sleeping periods can not now be distinguished.

June 1st. and 2nd.

No change of note in thrasher and road-runner daily activities.

Snakes are now more numerous in the garden and, on each of these days, Rhody discovered one. The first was small enough to serve as inspiration for display at various reflecting surfaces after having been slapped effectively on the rocks. It was carried to

his house and eaten. The second was pretty big and Rhody was content with viewing it as a spectator, according to Julio, as I did not witness the affair, being absent looking for bird subjects for the movie camera. (Principally birds feeding young in their nests).

June 3rd.

10:15 A.M. So far no change in thrasher and road-runner trends. Rhody still in his bunk at 6:45 A.M., coming down to get a mouse about 9 A.M. and immediately returning to the nest. He acts precisely as if he were incubating and maybe he is.

Temperatures are running in the high seventies and low eighties at present, so his nest addiction can not be attributed to cold.

June 4th, to 7th., incl.

Since the first of the month I have been absent several hours every day, but have observed the birds while home.

The thrashers have incubated faithfully, but have been unusually quiet and unobtrusive; in fact, although I have visited their area and called them several times each day, I have not seen either of them out of the nest during this period and have witnessed no change of shift. The bird off duty seems to leave the place entirely and I have heard neither call for relief. Julio has had similar experience during my absences when he is expected to keep in touch with the thrashers and Rhody.

During this period Rhody continued his recent practice of remaining in the nest most of the day (and night), coming down for but a few minutes at a time and then infrequently. Snakes are now numerous and he was seen to catch and eat one, after display, and discover another one too large to eat. He was also given a small yellow-bellied racer about 18 or 20 inches long. This he killed, presented at various reflecting surfaces with ritual, then took to the nest and ate. As soon as this operation was completed he came out to warm his back, perhaps to counteract the effect of the cold snake inside! In less than three quarters of an hour he was down again and discovered waiting patiently at the tool-house door for somebody to come and get him a mouse. He was given one and put it through the same treatment as the snake, precisely. It is difficult to understand his wanting a mouse so soon after eating the snake, and still more astonishing that he should have wanted the mouse so badly as to have resorted to the procedure which he uses only when very hungry.

On the 7th., while he was still in his house, he was shown a dead snake (killed by an automobile) and came down at once to examine it rather casually, returning at once to his house. A half hour later a larger one (3 feet 6 inches long--alive) was placed at his landing place. He merely glanced down at it and resumed his "incubation".

hody's habit
ange.

This almost continuous occupancy of his house is a marked divergence from his habit of former years. There has been nothing like it before, unless during the time when he was really incubating the future Archie and Terry. There are no eggs in his nest. It was examined on the 6th. during one of his short absences. Incidentally he returned at once when he discovered what was going on,

thus showing , probably, that the nesting impulse has not subsided for the season as yet. (Tests were made last year which showed that, when I climbed to one of his nests while the breeding urge was still strong, he would, on seeing me there, come and settle in his nest; whereas out of season, he would pay no attention to my action even when I pretended to destroy his nest.

Nesting of the Allen humming-bird.

On the 7th., I began to observe more closely the activities of a female Allen's humming-bird which had, on the first of June, been observed fluttering about the end of a drooping branch of a live oak close to a window of the stair landing. During the next few days this bird was seen to carry nesting material and place it at this place, working principally during the early forenoon, but in casual fashion, sometimes not visiting the spot for hours. Although the beginnings of a nest could be seen the first day on which the bird was observed, little progress was made until the seventh, when I arranged to take colored motion pictures with a 4½ inch telephoto lens, from the landing and 9 feet from the bird, and slightly higher than the nest. The nest, by the way, is 16 feet above the ground--an unusual height, I believe, for this bird.

It was found that direct sunlight shone on the nest between 3:25 P.M. and 4 P.M.; at other times it was either in the total shade of the house or in the partial shadow of the tree itself. A single leaf, to the stem of which the nest was attached at one point, obstructed full view of the nest from the landing, so an arrangement was rigged up consisting of pruning shears lashed to the end of a bamboo pole, and a cord running through eyelets by which the shears could be operated. This was used to clip off the leaf--a rather delicate operation, at 7 feet distance, without injuring the nest.

When the bird had left for (presumably) more nesting material the apparatus was put into operation; but the bird returned in the middle of it, buzzed in my face first, then went to the nest and sat in it and worked on it while the shears must have been in actual contact with the nest! Compare Dawson's statement (Birds of California) in reference to the Allen hummer: "......of our seven species, Allen's is consistently the most retiring and secretive, as well as the wildest when found". The bird left before the job was finished, but returned immediately afterward and resumed work. A series of motion pictures was taken, using various sized stops, in order to determine which aperture best fits the lighting conditions at the nest, as it is hoped that it may be possible to obtain a sequence covering the entire cycle from construction to the leaving of the young. The house-wren (and other "predators") may, however, rule otherwise.

It was possible to observe the building operation from a distance of about six feet, and it was at once seen that--at the present stage of construction, when the nest has but a slight depression representing the future bowl--the bird shapes the outside by sitting inside and reaching out and under the nest with her bill and pressing the latter against the outer wall while drawing the bill upward. Further, to my astonishment, it was seen that, during this action, the tongue was fully extended and was used in a manner which suggested irresistibly that the bird was applying saliva, or perhaps some adhesive secretion to the exterior as a binder or cementing material. She also rubbed her cheeks (as a brush?) around and a little below the periphery, heightening the suggestion. Still later, on returning and carrying nothing visible to the eye, she

entered the nest, raised her head, opened her bill widely and made what appeared to be an effort to disgorge something. However, I could see nothing issuing from her mouth; but as soon as the action ceased, she immediately applied her bill and tongue to the exterior of the nest as already described. As there would seem to be no particular object in returning to the nest carrying nothing, this action not only supports the inference of the use of binding material, but suggests that she had brought in her mouth something especially adapted to exterior application. One can only speculate at this point. She might have had a mass of cobwebs in her gullet, there to be treated with some secretion of her own, or she may have obtained some glutinous or pitchy matter of vegetable origin.

About 7 feet from her nest there is a nest of the bushtit from which the brood has left. She frequently uses this as a source of supply. It would seem to contain everything she needs, but her visits elsewhere are more frequent and she can be seen carrying spider webs, some of which become entangled with her head and the surroundings of the nest. At present she is giving most of her attention to the outside of the nest, applying the spider webs there; but she also stabs the parapet of the nest with her beak with nothing visible in her bill. (Injecting a binder or merely compacting the structure?).

June 8th. (Sunrise 4:47, sunset 7:30).

Thrashers still silent and incubating continuously, changing shifts without calls for relief.

Rhody still devoted to his house-nest and leaving it for but a few minutes at a time. Sometimes only for a run to the magpie cage, a minute or two play with them, followed by quick return to the nest.

llen Hummer. The Allen humming-bird's nest is growing slowly. The bird works actively for half an hour to an hour, then absents herself for like periods. Most of her attention is still given to the exterior, and the bowl is still rough and irregular, although she occasionally shapes it by bobbing up and down in it and "shimmying". This perhaps also compacts it.

She was again seen today apparently disgorging something over the edge and down the side of the nest, following the action by rubbing with her bill and tongue; but nothing could be seen issuing from her mouth. She gives little heed to spectators, not allowing her work to be interfered with, although she occasionally comes to peer at them.

The male has been seen only once in the vicinity of the nest, and then he did no work, buzzing off shortly.

At present the nest, in horizontal plan, is elliptical in form, not circular.

6:10 P.M. Dr. Grinnell, after seeing the bird at work this afternoon for our brief interval, suggests that if the bird is using something to bind the structure, it may be plant nectar--possibly from the diplacus (monkey flower) of which the bird is very fond. There is a lot of this shrub growing wild in the garden and this is its time of maximum bloom.

June 9th.

Allen hummer nesting.

At about 5:45 A.M. the Allen hummer was not working; but I watched only a few minutes. A few glances at the nest between then and 6:30 A.M.(when I left to join the Reynolds's in taking motion pictures of a fine colony of cliff swallows--actually on a cliff--in La Costa valley) failed to reveal her presence.

On my return about 4 P.M. it was found that she had raised the parapet of the nest, in the meantime, perhaps half an inch, with what looked like cotton irregularly applied, leaving the rim and the enclosed bowl in rough condition. She was not seen working later than this today, but the nest was not watched closely.

ody diverges rom recent ehavior.

Rhody, to my surprise, was not to be found at 4 P.M. and Julio said he had not been seen all day, suggesting that he had been away looking for me! This absence interrupts his last few weeks of almost continuous nest occupancy.

At 5:30 P.M. I found him sunning his back just outside the north fence. Although he had neither meat nor mouse (at home) during the day, he viewed my arrival upon the scene with utmost indifference, greeting me not at all. In 15 minutes he condescended to come home, but ignored me and went to watch the magpies. In a minute or so he came out for a long drink at my feet, then ran quickly toward his house, in which he settled for the night at precisely 5:50: the first time for some weeks that I have been able to distinguish between his "incubation" period and night resting.

June 10th.

Noon. Rhody has apparently decided against further absence today, although he has been occupying his nest less than usual. He was given a mouse at about 11:30 A.M., which he treated with elaborate ritual with presentation at the mirror, finally taking it to his house. There he cooed softly many times and finally, with the mouse still in his bill, resumed the full song that has not been heard for weeks. He sang perhaps a dozen times, incidentally establishing new records for him for the number of coos per song and for chnge of pitch during the song. The number of coos (9 being his previous record(?) frequently ran as high as ten in succession, and twice reaching twelve. Usually his song falls in pitch with the last few coos, but today, the pitch began to rise when about halfway through the song and lower thereafter. After eating the mouse, song ceased and he remained in his house as I left.

Rhody renews song, ut changes it.

llen hummer continues nest construction.

This has been an overcast, chilly morning. The hummer has been observed a few times working on the nest and seems to show increasing tendency to sit in it longer after each addition of material or period of active shaping.

The walls of the nest are beginning to show what ship-builders call "tumble home", that is, they are inclining in toward the center as they rise in height, so that the inside diameter of the cup at the top is less than at the bottom.

6P.M. She was seen at the nest but a few times during the afternoon and little more material seems to have been added; although it should be stated that I did not visit the scene more than five or six times.

Rhody elected to stay home after his long absence of yesterday, spending most of his time in the nest. A second mouse given him was again taken there and eaten after some display.

June 11th.

ummer working.

9 A.M. The humming-bird is at work now, "licking" the outside of the nest and jiggling up and down in it.

hody "discovers" me.

At [illegible] he emerg- ed from the magpie cage and ran swiftly toward me, following at my heels to the tool-house. There he cried and cried until he was given a mouse. Full ritual followed, without however, presentation at the mirror. His expectations appeared to be based on prospects to the north, so he went over the fence and took up a point of vantage where by turning his head from side to side, his vision encompassed a wide area spread out below. This brought no results, so in 25 minutes he was back in his house in the peppermint gum, after prospecting the intermediate territory, where he eventually ate the mouse himself after soft cooings--but not song. During his prospecting tour he was scolded by the ubiquitous house wren, wren-tits, one junco and some linnets a considerable distance away.

[illegible] reversal in form.

Incubation continues without interruption at the [illegible] nest and [illegible], which [illegible], of being totalled ignored by the incubating [illegible]. This is a distinct reversal of form by these birds. Since the first egg was laid in this nest I recall seeing neither bird away from it more than once or twice and then neither could be enticed to approach me. During my frequent absences recently (which may have something to do with their changed attitude) Julio has had similar experience.

rosbeaks here with their brood.

The Blackheaded Grosbeak has not been known to nest at this place, although it may have. However, it is here often in season, coming and going and usually appears with young ones about this time. This is the case at present. I went down to a cherry tree in the orchard to watch them feed their young. Rhody soon joined me, ostensibly to sun his back, but when I started for the tool-house, he led the way. Display followed! (1:30 P.M.). While we were by the tree other birds came to watch Rhody: Bushtits, two Allen hummers (the female not the one with the nest) linnets, purple finches, Nuttall sparrows and brown towhees.

ate grosbeak nest near Life Sciences ilding, Berkeley.

Male incubates too.

I have been watching a grosbeak nest at the University, which was started about a week ago. Incubation is apparently now in progress, as the nest is always occupied when I go there. This morning it was seen that the male was in the nest and that he called, using a phrase from his song, when he wanted relief, just as the thrashers do.

Hummer "decorating" outside of nest.

ozes in it.

pper lids close.

le comes.

2:30 P.M. The Allen hummer is putting "moss" (an alga?) on the outside of the nest. I watched her at 5 feet distance with 3x glasses. She still gets some material from the bushtit nest. She sat quietly in the nest for about five minutes and began to doze, her upper eyelids gradually creeping down to meet the lower. While dozing the male appeared, buzzed about for a few seconds, inspected me, departed.

The female seems to slacken work around five o'clock, visiting it rarely after that. She does not stay in it at night.

June 12th.

Thrashers continued incubating faithfully and silently, not even calling for relief. Neither was seen off the nest.

Rhody continued his home-staying and "incubation". The one mouse given him was treated with honors.

Allen hummer. The Allen hummer worked in casual fashion, mostly applying material to the outside of the nest and compacting the structure, which is now more nearly circular in plan, but looks "too small" for the bird, as most of her is visible when she sits in it. The parapet does not appear to have been raised during the day.

June 13th.

Allen hummer has one egg.

9 A.M. At about 8:15 A.M. it was seen that the humming-bird has one egg in the nest, but she continues to work on the outside, probe the parapet and "jiggle". No egg there at 6 P.M., 12th

She also sits quietly on the egg for several minutes at a time, but does not hesitate to leave it exposed for long periods.

Hummer drives towhee away.

9:20 A.M. She has just attacked a brown towhee--not actually striking him--but buzzed about him threateningly until he left the tree.

Thrasher chick due to-day.

This is the sixteenth day of incubation for the thrashers in their nest No.3--38, so there should be an egg hatched if all is well.

Neo back on [illegible] old footing--nearly.

11:30. About 15 minutes ago Neo was heard making the "bluebird" call softly toward the sage patch. I went there and he came fo worms, for the first time in weeks. He ate them himself, leaving when Rhody thrust himself into the picture. I bribed him by leading the way to the tool-house and "doing the necessary. Neo was back in the nest when I returned.

His first use of the call in weeks; his first coming for worms for a like period; his eating them himself; the 16 days--all coordinate with past experience to indicate the hatching of the first egg this morning. (Note that he took no worms to the nest, indicating that if there is a chick there, it is too young to be fed meal-worms).

At 1 P.M. Neo accepted a worm, prepared it with great care, carried it back and forth along the fence for a minute or so, as if uncertain what to do with it, then took it to the nest. It was not determined whether he gave it to the chick or to his mate.

Rhody showed no departures from form during the day.

Hummer still works on nest.

The humming-bird's attitude toward the nest during the rest of the daylight hours seemed little changed by the presence of the egg; new material was added and there were frequent long absences. Between 5 and 7 P.M. the nest was observed fairly often, but the bird was seen to visit it only once. At the time it was thought that this meant she would not cover the egg during the night; but an observation made at 11 P.M. revealed her presence in the nest.

June 14th. (Sunrise 4:46, sunset 7:35).

At 5:25 A.M. the humming bird was sitting in the nest.

At 6 she was away and it was seen that there was still but one egg. Between that time and 8 A.M. she was seen to add more material from the bushtit nest, and absented herself often for periods of several minutes. Only one egg.

The outside of the nest is, at present, "decorated" with an alga--the fibrous sort, such as grows in pools. From the side from which observations are made (S.W.) only one flake of lichen can be seen. A nest of the Allen hummingbird in Redwood Canyon, which is being watched, is liberally spotted with lichen, the effect being--after the nest is once located--to make it conspicuous instead of the opposite.

During the rest of the day the bird here was frequently away from the nest for extended periods, but occupied it during the night.

Rhody continued to make nest-sitting his principal occupation of the day.

The thrasher nest was not seen without an adult sitting in it.

June 15th.

At 6;25 A.M. the hummer was in the nest.

Hummer has two eggs.

At 7:30 she was out and two eggs were visible. Therefore, one day intervened between the laying of the eggs.

11 A.M. The hummer seems to alternate incubation with continued work at the nest--still adding material to it. There are now a half dozen or so conspicuous flecks of lichen on the S.W. side (toward the window). (The Redwood Canyon nest is much greater in bulk. It also has a tumble-home to the sides and the one youngster in it is secured against falling out).

Rhody's moult.

Rhody's feathers are now to be found all over the place: even on top of the chimney, where he favored us about 8 A.M. with a series of rattle-boos.

About the middle of the afternoon he was found up in an oak by the tool-house door struggling with small branches in order to bend them aside to form a clear space for a nest. He has examined this tree several times in the last year or two, apparently considering it as a nest site. On the present occasion he came down for a mouse after working a few minutes longer. With the exception of this incident, his daily routine was unchanged.

June 16th.

The Allen humming-bird continued to incubate and add to the structure. The material included spider-webs, lichens and something looking like cotton.

Rhody continued true to form.

At 7 A.M. Julio found that ants had invaded the thrasher nest and that there were only two chicks in it. He removed these temporarily and sprayed the surroundings.

About 5 P.M. I found Neo in the nest and offered him worms, which he would not take, even when they were laid on the rim of the nest. A little later it was noticed that ants were crawling on him and one was in one eye. He would not leave the nest until I lifted him out. During this process he pinched a finger but, curiously, seeing a worm still on the parapet reached out and ate it while still clasped in my hand! There was only one chick left, which I removed in order to give the nest itself a good spraying. Neo had popped back into the empty nest and sat there solidly, so had to be removed again. The job finished and the chick replaced, Neo resumed

his place and was shortly relieved by N2.

June 17th.

At 6 A.M. the hummer was on her eggs.

At 7 A.M. Rhody came to the dining-room window to remind us of his continued existence and his desire to live still longer; so he was given a mouse and was shortly back in his house again.

At 7:45 affairs seemed to be progressing satisfactorily with the thrashers--no ants at the nest--the chick still there.

Hummer still adds to nest. The hummer was very busy to add material to the parapet of her nest(presumably raising it?). The outside is now fairly well covered with lichens. She still compacts the structure by "jiggling". It is possible to distinguish between this action and that of rubbing herself down upon the eggs.

Rhody sings in nest, At 10:30 A.M. Rhody was much interested in some weeds near the cage, but when I passed by, trotted along behind to the tool-house where he was given another mouse. A ceremonious journey to his house followed. There, after a few preliminary hroos and coos he worked up into full song, with the mouse in his bill, attaining to ten successive coos. The mouse was then eaten and he settled in his nest. (Well, here he is looking in at the window. He goes to the roof, scolded by a house-wren).

June 18th. and 19th.

Little change in behavior of birds under observation.

Hummer. The hummer, on both days, added material to the nest, both outside and inside. Outside mostly spider webs; inside cottony stuff, usually just inside the rim as if increasing the bulge inward there. The exterior is now well decorated with lichen and "moss".

She continues to drive other birds out of the tree, having now added a thrasher and a house wren to her list of undesirables. Unlike the thrashers, she leaves the eggs uncovered frequently.

hrashers. The thrashers are attending to their single chick well and, unless my recollection is at fault, are hovering it more than former broods. Neo has relapsed into almost complete indifference toward me--never seeking me and not caring much about taking the worms tossed to him on the rare occasions when he is seen off of the nest.

ody. Rhody relaxed somewhat in his "incubation" and was out of his house more. He occasionally picked up twigs only to drop them and still investigates prospective nesting sites: the latest being at least 30 feet up in a Monterey pine.

June 20th. and ~~22nd~~ 21st.

During this period affairs remained static. The hummer continued to add material to the nest occasionally.

The thrashers continued to keep their one offspring covered most of the time and showed no interest in me whatever the few times I attempted to engage their attention.

Rhody again, once, sang in his nest while holding a mouse in his bill there.

June ~~23rd~~ 22nd. to 25th., incl.

I was absent during this period, but Julio says that the

Allen humming bird occasionally was seen to add material to its nest; Rhody was as usual; the thrashers remained silent, aloof and continued to hover the chick. Ants again invaded the nest and were repelled with spray.

Other road-runners.

RR in Kettleman Hills, compared with Rhody. On the 22nd. I saw a roadrunner by the side of the road in Kettleman Hills, stopped the car and walked up to him slowly. He retreated to an atriplex bush, but allowed me to approach to a point where I could look diagonally down upon him at about 8 feet distance. He raised his crest and cocked head and tail saucily, showing his skin-patch colors fully. It was seen that the red back of his eye was much more brilliant than Rhody's--a bright scarlet. (These notes have recorded gradual dulling of this color on Rhody). This bird was not very shy and walked away in leisurely fashion. There was another one about a hundred yards away.

Roadrunners in Beverly Hills. The morning of the 27th, I watched two roadrunners foraging in the rough and on the [illegible] of the Los Angeles Country Club in Beverly Hills. One of them, not seeing me, approached to within 25 feet from behind a bank and then seeing me for the first time, crouched flat upon the ground, watching me alertly. It allowed me to approach to about 7 feet where I talked to it and tossed it worms, some of which landed on its back and tail; but while it lookat them curiously, it did not pick them up, remaining quietly lying on the ground for several minutes. It was noticed that the "white" stripe below the eye (present in all roadrunners of my acquaintance, but not shown either by Sutton or Brooks in their colored portraits of road-runners) was more conspicuous than in Rhody, Archie or Terry. When this bird decided to leave, which it did without haste, it raised its crest and showed it colored skin-patch for the first time; it was seen that its scarlet was also brilliant as in the case of the bird at Kettleman Hills. It went to join its mate(?) nearby and the two skirmished about a little and wandered off foraging and dusting now and then. These birds were heard to rattle their beaks sharply, but, unlike Rhody's usual rattle-boo, voice sounds appeared absent.

At Kettleman Hills, I am told, roadrunners hang around the office of one of the large oil companies and pick off insects which have been caught on the radiators of the cars standing there. (DDC).

June 26th. to ~~28th.~~ and 27, incl.

During this period I was frequently away for several hours at a time.

Thrashers. The single youngster is still in the nest; the parents are hovering him less, but one seems to be constantly nearby. Neither approaches me.

Allen Hummer. Still incubating, but not infrequently leaving the nest for a minute or two. The male was seen for the third time near the nest for a few seconds.

Rhody's "Requiem" It was found that Rhody adhered to the new phase of his pattern of singing a "requiem" for his mouse victim while holding it in his bill and lying in the house-nest. (Incidentally, for months, he has not been seen anywhere near his old house in the oak on the west lot).

June 28th.

[illegible]
uail.

At 11:30 A.M. Rhody, who had apparently been in his house most of the morning, accepted my invitation to come down and accompany me to the tool-house. While waiting for me to make good my promise, he rattle-booed loudly once. When he went off with the mous toward the cage two quail rushed at him with loud alarm calls, momentarily startling him; however, he recovered his equilibrium and continued his march, bowing, tail-wagging and hrooing, toward the cage without reference to the quail, who retreated before him.

The mouse was carried to his house, and there he sang with it in his bill, for more than 15 minutes, ceasing--as is his present habit--after eating the mouse. He sang perhaps 30 times. Basically his song was the standard succession of coos and coo-coos, ranging in number from three to ten; but there was considerable variation in pitch, volume and tempo,- more than I recall having noticed before.

hody still
dds lining
to nest.

I forgot to record in its proper place that, when I invited him to come down, he was just adding a tuft of something soft to the inside of his nest.

June 29th. and 30th.

No changes were noted in thrasher or road-runner recent behavior.

Rhody again sang with a mouse in his nest and was also seen adding more lining.

July 1st.

oung thrasher
leaves
nest.

The young thrasher left the nest this morning. His parents seem to have escorted him away from the place almost immediately; since early morning not a thrasher has been seen or heard here.

llen Hummer
atches an egg.

Incubation
period?

About 9 A.M. I looked in the hummer's nest for the first time today. There was at least one chick. I saw none yesterday. The first egg was laid on the 13th., the second on the 15th. Dawson says that, counting from the laying of the second egg, incubation lasts 12 days. On this basis, one should have hatched on the 27th. June.

Rhody again sang in the nest with his mouse after a long period of bowing and hrooing with tail-waggings at many places, including the mirror.

His trick of "wahnking" when approaching Julio, mentioned in these notes some weeks ago as being new, was soon dropped; but yesterday, when he passed me as I was sitting in a chair in his path, he crouched low to the ground and uttered one wahnk. I am still inclined to the view that this sound indicates fear--but not of sufficient intensity to cause him to abandon his objective.

July 2nd.

The hummer now has two chicks in the nest, this morning.

Rhody true to present form all day, was given two mice, both of which received full honors with presentation at the mirror, followed by requiem in the house-nest. He came down from his house at 5 P.M., when I koke-koked at him, to get the second one. For the first one, he sailed down from a tree where I had not seen him, to make his wants known.

Neo was glimpsed once or twice during the day. It may be

that the chick has not been taken away. The fact that it has not been heard may indicate merely that, being the only one, it is too well fed to cry.

Watching the Feeding Operation ofthe Allen's Humming-bird.

I began a continuous watch of the Allen Hummer lasting from 3:30 to 4:54 P.M. The log follows:

3:30 P.M.; Female on the nest. (Male was not seen at all during this period)
3:40. After a short absence-- time of leaving the nest not taken--she returned (at 3:40) and fed both chicks, each being fed alternately, with strict impartiality, twice.
3:45. She flies from the nest.
3:48½ Returns, but does no feeding.
3:56 Flys away again.
3:59 Returns, but does not feeding. As before, covers chicks immediately--in fact, lands in the nest.
4:06 Leaves again.
4:11½ Returns, feeds both chicks while she sits on the rim of the nest. At first feeding observed the bill was thrust deeply down the throat of one young and not so deeply down the other. This time the "skewering" was less deep.
4:29½ Leaves again.
4:33½ Back in nest again--no feeding.
4:42½ Leaves.
4:46 Back in nest again--no feeding.
4:52 Away again.
4:~~58~~ 55 Back--feeds both.

This ended the period of continuous observation, but she was seen to feed both again at 5:15--no observations having been made in the meantime.

At no time during this period was it possible to see anything in her bill at 6 to 8 feet distance using 3x glasses. Feeding was apparently by regurgitation, the action being slow and deliberate, requiring 20 or 30 seconds to feed the two chicks.

It will be noted that she made two or three trips abroad between feedings--presumably to secure enough food to feed both and perhaps to allow partial digestion to take place. She did not feed them except immediately on returning from an absence; that is, after one feeding she had to go away to get more food; so apparently the period during which the food was subjected to the action of her own digestive apparatus (if any such action occurred) could not have exceeded the length of her absences. (This is pure speculation based on insufficient material).

At no time was she seen to add to the nest structure.

Yellow-jackets occasionally are seen buzzing about the nest, but not landing on it, seeming to be more interested in the nearby leaves. Hence, if this bird used any adhesive material in binding the structure or applying the outside covering, it probably was not the nectar of flowers.

July 3rd.

A Motion picture was taken of the Allen's hummer feeding her young at 4:15 P.M. Only one chick was seen to respond and it may be that one dead or missing. At the time yesterday's record was made it was seen that one chick was smaller than the other. When she returns from an absence there is usually an accumulation of pollen on her upper mandible. In feeding the chicks much of this is wiped off. (See frame from motion picture film July 3, 4:13 P.M.)

The young thrasher was encountered in the glade today. His parents were absent, but N2 finally appeared from the north.

July 4th.

Absent most of the day. Hummer was seen feeding one chick before I left.

July 5th.

Young thrasher again home--in the sage patch. Not very wild; parents absent, but N2 came shortly from the north, scripping.

Rhody showing increasing tendency to loaf about the grounds instead of "incubating" in his house; also slightly renewed interest in his nest 3-38, where he cried repeatedly when I talked to him and would not come down.

The Allen hummer was observed a few times only. Each time she returned from abroad--except when she immediately sat in the nest--she reached down into it as if to feed a young bird, but there seemed to be no response; she then enetred the nest and sat there.

July 6th.

The hummer continued to sit in the nest, absenting herself occasionally and, on returning was not seen to feed her chicks, although she made the same futile gesture recorded above. This was during the forenoon and part of the afternoon.

About 4:30 P.M. I reached down from a window above and parted the leaves above the nest with a fishing rod. The parent had just left. All I could see at about 8 feet distance was a dark blotch in the bottom of the nest and nothing moving.

Young hummers are dead in the nest.

I got a long ladder and went up to investigate, finding both chicks dead. One was completely desiccated and about the size of a blue-bottle fly. The other, somewhat larger, had not yet stiffened. It would appear from her actions up to this time that the mother bird has been unable to comprehend that her offspring are past all aid. It is thought that the second chick died on the 5th. I removed both. She was not again seen at the nest, even up to 10 P.M.

Rhody continued his new loafing tactics outside the house.

Neo, N2 and their single chick seem to be occupying the hill slope just north of this place. Scripping is frequently heard from there.

July 7th.

The hummer was not seen to visit the nest all day; but at about 3 P.M., as three of us were looking at the nest from the landing, two hummers (species not identified) skirmished through the nest tree and quickly disappeared. (This same female and mate renewing courtship?).

Rhody was scarcely seen after about noon-time until about 5 P.M., at which time he wanted no mice. He slept in his house as usual. He had had a mouse at about 7 A.M. and later ate meat.

July 8th.

At 7:30 A.M. Rhody was still in his house, but at 8:30 could not be located until I heard him whine from his nest 3-38. I had not spoken to him, so the stimulus that actuated him was

recognition of me by sight. (Or rather, seeing me passing by, was the trigger that set off the action). He continued his pathetic, two-toned whine for several minutes as I talked to him, then came down and followed to the tool-house. Full ritual was accorded the mouse;~~and~~ it was taken to his house and not nest 3-38. He did not sing there, merely wooh-wooing.

Neo now has a long tail and sings again

I now heard the vic'-toree phrase of Neo's full song nearby. Investigation disclosed a long-tailed thrasher in a ceanothus near the fig tree. Tossed worms brought this bird down promptly and it proved to be Neo, rehabilitated as to tail but, otherwise far shabbier than ever. The fact that this new tail was a surprise to me is an indication of how well he has managed to avoid showing himself in the last several weeks and of his increasing shyness during that period. Now that he has come for worms again, perhaps he will abandon his previous anti-social attitude.

Following Rhody one of his excursions abroad. What he did during 1½ hours absence.

About 9:45 Rhody was at the cage playing with the magpies. He came out on seeing me, noticed a loose tuft of his favored nest lining--California Everlasting--picked it up and considered taking it to nest 3-38, but changed his mind, dropped it and climbed a low acacia (Acacia latifolia) 20 feet from the cage, attracted by the evolutions of a pair of brown towhees who have a nest there. These birds placed themselves sullenly in front of him as if inviting attack, but he paid no attention to them or their nest and looked for a nesting site for himself in the same tree. He found a good "prospect" and worked for 5 minutes trying to clear away interfering twigs, gave it up and went over the fence to the north.

As these notes show, he has, in the last day or two, renewed these excursions abroad (or at least has"made himself scarce" in the vicinity of his house for several hours during the day).I decided to follow him for a time. He strolled in leisurely fashion toward the north-east, making about 3 to 6 feet at a time and then stopping to preen,"look and listen" and examine the ground at his feet. He was in no hurry and seemed to have no definite objective. He inspected the grounds of two houses near the N.E. corner of this place and then decided to go across Estates Drive toward Dimond Canyon. He crossed the street but did not like the automobile traffic, so returned to the house on the corner of Estates Drive and Inverlieth Terrace and went to the front door. Nothing developing of interest there, he went north across the street and examined a loose stone wall for lizards for a few minutes, then climbed it and sat preening and looking off over the lower country to the west from the top of a pile of rubbish. An oak nearby next commanded his attention and he took a twig up into it and looked for a place to put it. However, th tree afforded no favorable nest site and he sailed down 50 yards to the west to cavort around a young Liquidambar tree (just planted) in the top of which a hummingbird sat. This bird buzzed over him and made swoops down at him, Rhody making impertinent gestures of head and tail, but soon tiring of this entertainment, he flew up to the roof of the Nichols house at 10:15, there to preen and sun his back, having accomplished nothing of a constructive nature at all. In this time he had covered perhaps 400 yards of space and was still within 75 yards of his starting point. I left him still on the roof.

He was not seen home again until 6:05 P.M. and I believe was away all that time. I saw him coming back from the north at that time. He entered the cage, brought out a piece of mest, picked a few crumbs off it, abandoned it, then went to play with the magpies. He wanted no mouse.

July 9th.

ell, poor old Rhody is in another of his "harmonics" superim-osed upon the fundamental ave of his nesting cycle.

At about 7:30 A.M., Julio discovered Rhody hard at work carrying twigs up into the glass house in Brownie's dormitory tree. He wanted nothing to eat, having no other interest than nest-building. This is now the third season that he has worked in this house. I forget the code numbers for the preceding years, but this is now nest 4-38 at this place. What he may have done elsewhere, I do not know.

At 8:30 he was resting but wanted no mice.

At 9:30 he was hard at work again, wanting no mice.

At 10:15, still working, wanting nothing from me.

At 10:30 I gather some everlasting for him, which he immediately carried up to his nest, even though it was in its green state. Still he wanted no mouse. My presence does not bother him in the least.

A few minutes later he was willing to consider the mouse question and followed to the tool-house. The mouse given him was killed; ceremony followed, but it was abandoned. A short period of uncertainty as to what next to do and he climbed a pine tree north of the house (goldfinches protesting) then sailed south over the low part of the house and could not be located on the other side, although in searching for him, I discovered a thrasher with both mandibles broken off entirely, leaving but two short stubs of unequal length.

(Broken-billed thrasher).

(By following him, it was found that he was subsisting on the suet "pudding" at the oval lawn. A supply of soft food was then placed there for him. As the California thrasher's bill is specialized in form for digging and turning over stones and litter, this injury is a particularly severe handicap. The bird appears to be a bird of the year).

About 1 o'clock Rhody was discovered in the upper garden, now anxious for attention. He accepted readily the mouse he had killed and left a short time before and gobbled it without being at all finical. He was not seen to work on the nest again, but loafed the rest of the day. At 5 P.M. he had another mouse, which he took to his house and ate, coming down later to play with the magpies.

The broken-billed thrasher continued to subsist on our offerings at the feeding station.

July 10th,

Rhody loafed all day; had two mice; played with the magpies; did no work on the nest.

Broken-bill continued to patronize the feeding station.
Neo was seen once or twice, but he is shy.

Allen hummers are occasionally seen in the vicinity of the abandoned nest, but not seen to enter it. Hummers are now as numerous here now as I have ever seen them, perhaps more numerous. They are Allens and Annas and seem to be "all" females or immatures.

July 11th.

Rhody was seen at work on his nest in the glass house again at 7 A.M. He worked faithfully until 10:45, with the exception of a short "time out" to insult the magpies and to get a mouse from me. This mouse was used to dedicate the new nest. This accomplished, work continued, but only for a short time. The rest of the day he loafed, preened, attended to the magpies and made short inspection trips

up in the canopies of the trees, perhaps searching for more nesting sites.

Rhody's moult.

He does an immense amount of preening, principally on his body feathers; the principal purpose seems to be removal of the sheaths of the new feathers. From time to time I find freshly moulted wing feathers and now and then a tail feather. He appears to be short two rectrices: two of the middle four, but their successors may be seen emerging from the tail coverts. His moult covers so long a period and is so gradual that he never looks very shabby.

Neo and N2 came home with their single youngster of the third nest and, at 7:05 P.M., all three were in the immediate vicinity of that nest. This chick's bill is in perfect condition so Broken-bill is from some other brood. Neo is about as shy as he was when first seen and N2 is perfectly wild.

July 12th.

This was another day of loafing for Rhody with occasional short trips abroad. He displayed for mice (2) given him, but the second one was eventually abandoned. He was seen in the glass house and also 3-38, but not seen to work. From about 5 P.M. until well after 6 o'clock the magpies required most of his attention.

Neo's moult.

Neo was seen twice at the feeding station at the oval lawn and was induced on one of these occasions to come and get worms tossed to him. He was as shy as he was during the first days of our acquaintance. He now looks as if he would fall apart at any moment; he is so shabby and loose looking.

July 13th.

Rhody, still in grip of his latest harmonic, but appears unable to coordinate his activities usefully.

About 10 A.M. Rhody was in the glass house (Nest 4-38) moving things around in there. When he came down he went immediately to the magpies. I got the mouse he abandoned yesterday and knocked off the ants (which had already removed part of its fur. Rhody, in the cage, saw me approaching and immediately ran to the wire and cried for the mouse. It was pushed through the netting to him. Again he illustrated the trait referred to some time ago in these notes, of showing greater confidence in me when there is a physical barrier between us--evn so slight a one as a light poultry netting(with wide, one inch, hexagonal mesh).

He followed with ritual and presentation at the mirror. Next he carried the mouse up to the contemplated new nest site in the acacia by the cage (See July 11th. notes) and considered matters. In a few minutes he was down, very undecided as to what next to do. Nest 3-38 eventually was decided upon and he carried the mouse there. Soon he began to sing his "full song", but not with full power. He sang it 14 times at intervals ranging from 30 seconds to a minute or more, stopping as I approached to say coo-coo twice very plainly. He now ate the mouse, came down and ran, hot-foot, to the magpie cage; there to make passes at the birds followed by a short rest lying down on his "armchair" shelf against the wire. Now followed several minutes of aimless strolling about in the vicinity of the cage, bill-wiping, preening, and "spread-eagling" sunning on the ground. (Temp. by the court thermometer in the upper garden 66°. See how closely he conformed to temperature limits tentatively set as those between which this pose is used instead of the "open bowl").

About 11:15, after a good drink, he went up into the acacia again and spent a long time inspecting the contemplated new nest location there, examining all the branches and twigs surrounding it

tugging at some of them and, at last very carefully, placing a small twig ~~carefulky~~ across what appeared to be the best support. After [illegible] elementary structure [illegible] in the [illegible].

Rhody has now practically ceased occupying his house in the eucalyptus tree during the daytime, but sleeps in it as usual. (12:30 P.M. Just found him comfortably stowed away there!)

In my notes of July 11th , N2 was reported as "perfectly wild" again. I find this too strong as, at about 1 P.M., much to my surprise, she accepted my invitation to pick up worms tossed to her at the glade and gave them all (about a dozen) to the surviving youngster, who is big and strong and not very wild.

2's moult. She is also moulting, but is sleek compared with Neo.

July 14th. to 16th., incl.

During this period I was absent, returning about 9:30 P.M. on the 17th. (In extreme N.E. California.).

July 17th.

Rhody loafed during most of the day, although he was seen to carry one twig to nest 4-38 (in the glass house). (For hawk incident of today see middle of p.1602).

Thrashers. Broken-bill seems to be successfully overcoming the handicap of his mutilation.

The sole survivor of Neo's third brood, last reported as being strong and active, does not look so well now.

July 18th.

This young thrasher of the third brood appears distinctly on the down grade, with drooping wings and uncertain gate, resting for long periods with closed eyes. Once I succeeded in getting N2 to gather up meal-worms for him. She took about 6 or 8, carried them to him and tried to induce him to "open up" by sidewise pressure of her bill against his, every few seconds. In his weakened state this caused him to stagger. Once or twice she got worms into his bill, but he dropped them weakly. Some of these she ate herself. He may have swallowed one or two, but he is plainly in a bad way. Neo was not seen during the day.

Rhody worked a little in the glass house and spent much time in the cage either flirting with the magpies or lying on his shelf composedly. He does not "incubate" in his house in the gum tree now.

July 19th.

hrasher mis-
ortunes. The young thrasher of the third brood was found dead. Now here is a case of a youngster apparently dying under conditions as favorable to his welfare as could be imagined: perfect weather; the sole care of two parents; abundant food supply.

A review of thrasher experience of the present season shows:

Nest No. 1.	Three chicks. One mauled by dog and died. One when last seen, weak and wobbly: perhaps succumbing. The third thought to be the one now known as Broken-bill. +
Nest No. 2.	Brood destroyed in the nest.
Nest No.3 .	No survivors.

+ Jan 1939 Don't [illegible]

At 8 A.M. Rhody was met face to face in the pathway by his nest house in the eucalyptus. He was carrying a many-branched twig. This he carried up to his house, carefully placed and then cried. As I walked away he came down, ran rapidly with spread wings to overtake me and followed to the tool-house. He refused all mice of the assortment offered (one at a time) of different sizes and colors and finally walked away to play with the magpies. (Here he is now. Looking in at the window. 9:45. He goes up to the roof silently). When I walked away from the cage he again followed to the tool-house and waited at the door, crying. I offered him the smallest of the mice, which he had refused only about 5 minutes earlier, with the same result. I now found one only about half the size. This Rhody gulped down without ceremony of any kind, again showing--as has been so many times recorded in these notes--what appears to be accurate determination of the size of the mouse required to satisfy his appetite of the moment. With "Hamburger steak", which is ground meat, he can, and does, select lumps of sizes to suit his appetite, or if no such lump is to be found in his dish, he takes a large one and picks pieces off of it. His preference is to bolt all food without picking it to pieces. He can not tear mice apart and, although he is able to swallow whole the largest mouse yet offered, he seldom makes the error of taking one too large for his requirements of the moment. He has the "intelligence" and the discrimination to wait for me to produce one of the proper size, and although he is hungry, he will turn away, self denyingly, if the offering is too large.

At 9 A.M. Rhody had transferred his attentions from his house in the eucalyptus tree to the glass house in the dormitory tree and was carrying twigs to his nest there (4-38) pausing occasionally to renew his attentions to the magpies (who ignore his antics).

Hawk incident of the 17th.

I overlooked recording in its proper place a hawk incident of the 17th. I was standing with Rhody under the canopy of the tree in which he has nest 3-38. He had a mouse in his bill and was considering taking it up to the nest when a large hawk (Female Cooper?) darted along the pathway 10 feet from us and about 5 feet above the ground. Rhody fled instantly and I went and got a gun. Rhody, without the mouse--at least outside himself--was standing in the path warming his back, apparently having calmed down completely. The hawk could not be found. What became of the mouse, I do not know, but Rhody followed me to the tool-house and had another one; so I suppose he lost the other.

Coming back now to the 19th: At 11 A.M. Rhody was found walking on the roof of the cage apparently in continuation of his sky-line peregrination. He gazed down at me and cried, so I turned toward the tool-house followed closely by him, eager for a mouse, which he evidently needed for advertising purposes as he resumed his tour with full ritual, carrying the mouse with him.

During the rest of the day (when seen) he loafed and played with the magpies.

July 20th.

About 8 A.M. Rhody, having had a mouse, renewed work in perfunctory fashion on nest 4-38, got tired of this and turned his attention to the new site that fascinates him in the acacia tree, adding one twig to it .

I was away for the next few hours. About 5 P.M. he was prompt in coming for his mouse. Display followed and once he sounded his rather rare cooh--coo.

broken-bill. This bird seems to be making his headquarters in the shrubbery around the oval lawn.

July 21st.

At 8:15 A.M., who had had a mouse at 7:45, was sunning his back near the cage, but, on seeing me, went up to look at his nest in the glass house. He came down soon to fuss with twigs, at last taking some to the nest.

[illegible]

An hour later he was gathering twigs for his new one in the acacia tree. I broke up some that were too large for him, which he accepted, but took toward No. 4-38 instead of to the new one. In passing the cage, the magpies attracted him; he dropped the twig, went in for a few seconds then came running back toward me, stepping over the abandoned twig to get another one close to me. This he took up to the new site in the acacia, and when I left about 9:45, he was working there steadily. This, therefore, seems to be a serious effort and will be assigned tentatively the code number 5-38.

works diligently on his [illegible]

10:15 A.M. Rhody is giving all his attention to 5-36 and is working industriously. He seems to have some conception of the type of twig needed at each stage of the work, for he does not pick them up at random; he may examine a half dozen or more before selecting one finally. In general he is not using any but those having many forks--at present--but in size they cover a wide range from say 6 inches maximum overall dimension to 2 feet. It is necessary at this stage to have twigs of many forks, so that they will have a strong tendency to catch on the branches of the tree and remain in place of their own accord, for the place selected upon which to build the nest has but few branches. While he depends to a considerable extent upon chance to secure lodgement of the first few twigs in stable position, there is much adjustment of them with the bill after they are placed and this adjustment seems to be the result of the "study" that he constantly makes of the structure and its immediate surroundings.

During all this activity his demeanor is that of one happy in his occupation, light-hearted and intensely interested.

10:45. Still busy. His platform is now stable enough so that he can stand on it without having to be too careful about securing his footing. His favorite weed, the everlasting, even at this early preliminary stage, is tempting and he frequently looks at it, pulls it and, a few moments ago, finding a loose, leafy stalk, carried it up and crammed it down into the platform. Curiously, for some obscure reason, he has not cried--as is his custom when building a nest--when I stand near and talk to him.

knocks off [illegible].

At 11:05 he suddenly quit and sailed down toward the glade. Here he had a drink. Then followed a leisurely tour through the orchard, up to the oval lawn, then to the roof of the living room, being scolded en route by the two kinds of towhees, wrentits, a goldfinch, song sparrows and starting an unseen thrasher scripping. From the west point of the roof he seemed to enjoy the view over hundreds of square miles of bay, city and country spread out below, [illegible] magpie cage and, by 11:35, was looking for more twigs at the base of [illegible], not to 5-38 but to 4-38 in the glass house! Truly, as Coues says, a singular bird!

Resumes, [illegible] -38!

July 22nd.

By 9 A.M. it was seen that Rhody had already added considerably to his new nest 5-38. He was away, evidently gathering material at the time, but soon returned with a large twig. He continued to work industriously until long after 12 o'clock, not stopping for

food of any kind. Offers of mice did not tempt him. He resumed his former habit, while nest-building, of occasionally whining when spoken to. In the afternoon he loafed and preened and was content with only one mouse.

hrashers. (Neo) Neo was glimpsed only once and ran away promptly. He is still a wretched looking creature. Maybe he is ashamed of his appearance. He has not been heard to sing for days. (Since last recorded in these notes). There is still practically no thrasher song to be heard in this vicinity.

Brokenbill. This bird is still here and seems to be holding his own.

July 23rd.

Rhody's nesting operations. Rhody continued work on his nest 5-38 during the forenoon only. It is now a fairly substantial structure in which he can lie with comfort. He did not work so fast today.

Thrashers. No change.

July 24th.

rokenbill sees the light. About 9 A.M. I made my first serious effort to interest Brokenbill in me as a food provider at the Oval lawn. He responded at once to a tossed worm and ate 10 of them. The ends of his broken mandibles do not meet and he had difficulty in picking up the worms.

He seems to be a bird of the year, although I think his eyes have attained their adult coloration and he seems to be full grown; but he has not the detailed markings of the adult on ear coverts and throat. However, as he is moulting, it is impossible to judge as to his state of development from his plumage. As yet I have not, with certainty, heard a sound from him.

hody working 5-38. At about this same time Rhody, who had had his breakfast-mouse, was found working on 5-38. He worked only during the forenoon, and then only a little "calking" voids in the bottom of the nest with soft material.

hody in the ge with the gpies. In the afternoon the various compartments of the cage were thrown together, giving the magpies the run of all of them. This attracted more than the usual attention of Rhody, who swarmed all over the cage trying to get at them; so I let him in to see whether his attitude toward them would suddenly change and he turn suddenly meek as he did when I let him in with them several(?) years ago. This time he immediately attacked them and drove them all about the inner cage and feathers were seen to fly, although, as the magpies are moulting they may have been only loose feathers ready to fall anyway. Rhody rattle-booed and the magpies screamed, but the affair lasted only about 20 seconds or so and Rhody did not press matters. The magpies quickly quieted down and Rhody began exploration of the glass-covered upper annex. They all remained in the same compartment. After a few minutes Rhody again delivered another short attack and the magpies retreated precipitately into the compartment which they usually occupy. Rhody did not follow, soon lost interest and came out. At no time, I should say, did he appear to have any serious intention of doing them severe bodily harm and, as far as could be observed, he did not discriminate between the two birds.

rokenbill again comes for worms. A second attempt was made to interest Brokenbill late in the afternoon with success and he ate worms freely as long as the supply lasted, coming out into the open for them.

July 25th.

Rhody worked very little on 5-38 and only in the forenoon. The afternoon was spent in loafing and preening. He had two mice and, while standing near me, made strenuous efforts to disgorge a pellet without success. As noted before, he attempted to assist the process by "massaging" his throat.

July 26th.

hody absents imself. Rhody, after a light breakfast consisting of one small mouse about 7:30 A.M., went to the chimney top and was not again seen until 7 P.M. (though repeatedly looked for) at which time he was found partly up to his house in the eucalyptus tree. One backward glance at me without greeting of any kind and he ignored my presence thereafter.

hody again away. July 27th.

This day Rhody did not wait for breakfast and was not seen until about 4:30 P.M., when Julio, working in the garden, heard a whine behind him and there was Rhody expecting attention, which he got in the shape of a mouse. Thereafter he loafed and preened until bedtime. He also ate the meat in the cage for the first time in several days, so that, whatever he was doing abroad, had not satisfied the wants of the inner bird.

Thrashers. Brokenwing has not been seen since I last fed him.

Neo was discovered on the west lot near the fence and, for the first time in days, responded to urging, came and got tossed worms, but was very shy.

e's moult. He looks a little better as to plumage, but not much. The back of his neck is still without feathers as it has been for months. As with all thrashers observed here, his new feathers are lighter and grayer in hue--so much so as to alter his appearance greatly.

July 28th. (Sunrise 5:08, sunset 7:23. The sun now is rising about one minute later each successive morning and setting about one minute earlier).

hody again goes away. Rhody again disappeared before he had his breakfast.

1 P.M. He has just returned and wants nothing from me. I wonder if his recent travels, bearing in mind his attempts to disgorge a pellet on the 25th, have anything to do with that circumstance; in other words he may feel the need for a change of diet. A few scaly lizards might aid in scraping out his pipes. On the other hand it may be that he has discovered another tree which needs to have another nest built in it.

Rhody partly allows ouse, but rejects it. Rhody remained at home all the rest of the day and, at 3:30 P.M., followed to the tool-house for a mouse. This one was still kicking when he proceeded to swallow it, without ceremony, and was about to disappear entirely when Rhody gave a quick start and hastily disgorged it, still kicking. The impression gained was that it had bitten him. R now watched the mouse until its struggles ceased, then reached forward gingerly and took it up by one hind leg only to drop it again. I was unable to induce him to take it again and he wandered off.

Thrashers. Brokenwing not seen all day. Neo ditto. No thrasher song now being heard. N2 has not been certainly seen since the last chick died.

July 29th.

ody off again.

Again Rhody disappeared without breakfast and was not seen again until after 6 P.M., when he was seen to enter the cage and get some meat. He was now ready for a mouse on top of this and it was quickly swallowed without ceremony. He has now had but two mice in four days. It looks as if there might be something in the change-of-diet hypothesis.

awk after uail.

Just before Rhody returned there was a loud disturbance amongst the quail near the entrance and two adults with a flock of youngsters burst out while loud screams as from a captured bird sounded from the shrubbery on the bank. I had already dashed to the scene, thinking Rhody might be the culprit (though he has never been seen to attack quail) when a hawk flew out of the bushes within three feet of my face and darted away carrying nothing.

July 30th.

About 7:30 Julio gave Rhody a small mouse when Rhody refused a larger one. (Again the discrimination as to size). This time Rhody did not go away and I found him resting near the cage at 9 A.M. An Anna humming-bird came to a lily four feet from him and began to probe the blossoms. Rhody immediately crouched low and concentrated his attention on the bird as if about to spring at it. However, as this pose involves practically the first movement in assuming the spread-eagle "sun-fit" and temperature conditions (about 70°) were auspicious, Rhody almost immediately forgot about the hummer and spread out into appropriate posture. Even when the hummer hovered over him, he did not stir. As I passed him he rose, tagged along behind, followed by the hummer part way to the tool-house and only about an hour and a half after eating his first mouse, accepted a second and downed it without ritual of any kind. (His "pipes" are now free of mouse fur?). He now sought a place to preen and at once became the object of attention of two hummers; two Bewick wrens; one robin; two brown towhees and some other unidentified birds--paying not the slightest heed to any of them.

This proved to be a day of much loafing-, preening and sun-fitting at home. About 2 P.M. he had his third mouse of the day.

July 31st.

Rhody had already gone away before 7 A.M. Up to now (4 P.M. he has not been seen.

At 4:10 P.M. I walked quickly into the cage, not suspecting Rhody's presence and therefore not being careful to avoid abrupt movements, and found that he had eaten some of his meat. I heard a slight sound behind me and saw Rhody on his "armchair shelf"; my head must have passed within one foot of him and I had not seen him and he must have tolerated action on my part which ordinarily he would have considered as menacing his safety!

Rhody wanted no mouse, but after a prolonged "sun-fit" that started him panting and hurrying into the shade, he went up into that same acacia tree that he affected at about this time of year (for the first time in months) and composed himself to rest. This is the tree which, as pointed out last year, gives him an apportionment between light and shade such that, with temperatures in the eighties, it is not necessary for him to move from sun to shade and vice versa at frequent intervals in order to be comfortable.

Rhody's moult. It was observed that his scapulars, wing coverts, etc, as was the case last year at about this (?) time, have lost the sharp tips of the individual feathers and his tail is now made up of feathers no longer uniformly graduated in length, with some missing.

About 5:25 Rhody came down from his tree and rattle-booed (to attract attention). He gradually strolled toward where I sat in the shade (80°) occasionally rattle-booing softly. He moved about circumspectly close behind me in the shrubbery booing again. I knew what he wanted, but waited to see what he would do about it. He started for the mouse place a couple of times, each time returning. Finally I yielded and we got the mouse. This was killed and eaten at once, which has lately been his practice. This and his wandering abroad, with neglect of building operations even on new construction is interpreted as presaging the fading out of his mating urge either for this particular "harmonic" of his nesting cycle or for the fundamental wave of the season.

(At this point I looked over last year's notes for a few days each side of this date. I had not read them in the meantime. He is repeating himself! More--those same notes call attention to his having been doing the same things in 1936!). I have not looked up 1936; but for 1937, the 1938 notes for this season, of the year apply almost precisely--even, the lost feather-tips are recorded there with the increased wanderings, neglect of newly started nests and selection of the acacia tree for the same reasons as advanced here. It is [redacted]

After having his mouse Rhody returned to the same acacia, despite the fact that the sun was now off of it, and at 6 o'clock when I left, was still there. (I do not remember his doing that last year). This dids not seem to fit in altogether with the light-and-shade hypothesis as sole cause of his selecting this particular tree, so I went and had a look at him. I found him on exactly the same branch (or branches) as he used last year, as was soon evident, for the perch selected consists of two small parallel branches in contact with each other and horizontally disposed. They are of such a size that he grips both with his feet, thus securing firm support without too much muscular effort and, at the same time, a two-point contact for his breast-bone, giving added stability.

August 1st.

Rhody was not seen here until about 9:30 A.M. He was then removing loose feathers while sitting on a lath screen over a rhododendron by the Dormitory tree where the glass house is. He came down for a drink then, seeing me trying to chase a young spotted towhee out of the cage, he came over to "help" by trying to get at the bird from the outside. This proving disappointing, he started in through the open door just as the youngster flew out. Rhody followed him to the glade swiftly, but when the towhee stopped there, in plain sight, did not attack him, but wandered off gazing up into trees, finally winding up in the "Optimum acacia"(see paragraph above) where he settled for a rest on his double roost.(74°).

3:15 P.M. Temp. 86°. At this temperature Rhody finds that he needs complete shade, preferably with a breeze. The optimum tree admits too much sun . For about two hours and a half he has remained in an acacia at the east end of the cage where he gets deep shade and a breeze. Occasionally he puffs even under these conditions. A thermometer, which has been checked with the one in the court, and which

was hung 2 or 3 feet from Rhody in his shady place, also shows 86°. At 3:35 Rhody decided to come down for a mouse--his first of the day--and rattlebooed once while waiting for it at the door of the tool-house. This mouse was swallowed too hastily and Rhody had to reject it quickly, but after waiting for it to die, he gulped it down.

Thrashers. Brokenbill has not been seen since last noted herein.

Neo is away most of the time.

There is no thrasher song, but occasional scrips are heard, an a bird, thought to be Neo, occasionally is seen on the slope to the north and entering the Gibsons' garden a stone's throw north and lower down. N2 is not seen .

At 4:45, temp. 82°, Rhody was found back in the optimum tree. The sun was still on the tree, but being much lower, the proportion of shade was greater.

hody roosting lsewhere? During this period of long absences Rhody has returned to sleep in his house in the eucalyptus tree; but tonight, he could not be found there, although there is a possibility of overlooking him when he crouches low inside.

August 2nd.

Rhody again was unaccounted for during most of the day and was not seen until 5:30 P.M. although he had eaten his meat somewhat earlier. Calling brought him into the open and he followed to the tool-house promptly. There, however, he first refused a medium sized mouse and then one much smaller, although he pretended to hunt for one of them which ran into the bushes, but allowed it to escape. He now went toward his house in the gum tree; but up to 7:45 P.M. he was certainly not in it, nor could he be seen in any other of his known roosting places. I do not know where he is. The last two nights, especially, have been very warm and there is a possibility that this circumstance has some bearing on his decision to sleep elsewhere.

eo increasingly y. Neo is behaving like a wild bird, running away when anybody approaches.

August 3rd.

Rhody did not show up until about noon, when he ate meat at the cage. He did not want a mouse until about 3 P.M. In the meantime he had been loafing and preening and using his "optimum" tree. He continued thus until 5:30 P.M., when he came down from his tree and dusted at various places as a preliminary to calling it a day. I now resolved to see where he was going to sleep, so kept in touch with him. He started toward the eucalyptus, considered going up to his house there (as judged by his actions) then climbed up the bank by the fig tree to the former road (down which he used "to go to the west" when he was roosting in the west lot). This road is now but a path through the rhodendrons and azaleas and terminates in an abrupt bank near the oval lawn. He followed this path until he came to the end, then ascended to the main driveway by the lawn, looking up into the trees as if seeking a good roosting place. He continued by easy stages toward the west considering all the trees, the last being the one by the west end of the living room in which he built nest (still there). It was now about 6 o'clock.

I do not think that he had any definite location in mind at this time. For several minutes he sat on top of the retaining wall,

, which supports the road west of the house, looking off to the west and considering his next move. Eventually he crawled under the fence after having considered whether he should fly over it directly or indirectly by first climbing a tree which overhung it. After prowling through the brush by the fence he went out into the open space scanning his surroundings with great care. He now seemed to be getting apprehensive and once, when startled by a huge furniture van in the street, ran swiftly toward me in manifest fear, and became semi-frozen. After many short moves and long waits, he went to the old ladder tree, went up through it by almost the identical route that he had standardized and, at 6:24, leaped across the gap to the house tree. In a minute more he was in the house, settled comfortably.

However, last night, he was not in it, up to 7:45 P.M. at least.

August 4th.

Rhody absent during the forenoon; loafed at home during the afternoon, having one mouse. At 6:15 P.M. he was on the bank near the eucalyptus and I left him there as I had an engagement.

At 10:30 P.M. I could not see him in the house there with the aid of a flash-light.

August 5th. (Sunrise 5:15, sunset 7:15).

o comes for rms again.

At 10 A.M. Neo ran out of the sage patch at my approach, but this time, halted when I called to him. He came back shyly and took worms tossed to him.

o's moult.

His new feathers are coming in rapidly--even the long-delayed feathers on the back of his neck. His head feathers appear to have been entirely renewed. They are very gray in tone and dishevelled. His central rectrices seem fully grown out and lie smoothly, but outer ones on each side, partly grown, do not lie parallel with the others and their vanes look as if the shafts of the feathers had been twisted about their axes.

[illegible] ow that [illegible]

[illegible] (not the tool-house) to get more. While I was inside a loud rattleboo sounded in the doorway. Rhody had seen me entering (I had not seen him) and was announcing his presence and need of sustenance. I went out and talked to him before taking the hint and he rattlebooed and hung about my feet until I went to the tool-house and got him a mouse. This he gulped without display and, again had to disgorge hastily because of lack of thorough "preparation". He still was impatient and again swallowed the mouse before it was dead, his breast feathers fluttering for a few seconds.

He now went off into a mild "circus" then composed himself for a sun~~p~~bath, hesitating, so it seemed, as to the type to be used. The spread-eagle pose won. I went to the court to read the thermometer (because this is a morning much cooler than it has been recently). Temperature there: 64°--just on the threshold [illegible]

An hour or so later Neo, without being solicited, ran toward me for worms from the sage patch. But, on seeing me again, about noon, ran off as fast as he could.

About 5:15 P.M., on returning from an absence since 2 o'clock I found a visitor (H.I.E.) waiting for me at the pool near the oval lawn watching Julio doing some work on the water piping.

Rhody and stuffed owl.

As we stood there Rhody came sauntering down the steps. This was unexpected as he does not ordinarily voluntarily approach agroup of persons, choosing to avoid them. It was seen that he was apparently intent upon some project of his own, as he began looking about the shrubbery, cocking up head and tail in that "impertinent" gesture of his. Soon he wandered off to the west, looking up into the trees (as he did yesterday when seeking a new roosting place?) and I though that this was the last of him for the day, but in a few minutes he reappeared from the east, still "searching" about a hundred feet away. E and I went toward him and he came as if to meet us, boldly. He wanted no worms tossed to him, but went up into the upper garden (Court, patio) and to the office window, still with his jerky head and tail movements. Julio, who could not see him, asked where he was, and I told him. J said:"He is looking for the "ole". I asked: "What hole?" J said that, about a half hour earlier, he had heard Rhody rattle-booing in the office (a room adjoining the shop and communicating with it) and that on going there, he found Rhody walking about the desk looking up at a stuffed owl which I had borrowed from Dr. Reynolds for "experimental purposes". (Western ~~Great~~ Horned Owl?).*

I went up there and brought the owl out. Rhody approached it carefully and circled about it, making no sound whatever, intensely interested, making no hostile moves but much on the alert. He seemed fascinated and the element of fear, if present, as I suppose it was, was subordinated to some other ruling stimulus. After a few minutes of this I returned the owl to its place and Rhody then came into the office and rattled-booed once, walking around the desk, looking up at the stuffed bird, then going out. I went out and closed the ~~do~~ door after me and Rhody continued to prowl about the garden and look up into the trees searchingly.(J remarked:"He has the owl in his mind"). I now cross-examined Julio and elicited the information that " two or three days" ago he had seen an "ole" like this one "with those, I don't know what you call it, feathers on its head" up in the old oak, which is only 80 yards or so from Rhody's house in the eucalyptus tree, about 8 o'clock in the evening. Further questioning produced the information that he had seen it several times and that the last time was "the first of this month".

An owl the cause of R's changing sleeping place?

(Looking back over these notes, it will be seen that Rhody was first thought to have changed his sleeping place August 1st. There is, therefore, a strong suggestion here that a horned owl has been responsible for Rhody's shift to the old house at night, and that (as was one of the conjectures at the time) his ~~first~~ desertion of that house was due to the same cause). I now thought, if Rhody associates this stuffed bird with that other one, "maybe he will think we have removed that hazard and he will return to the eucalyptus house tonight". However, it did not work out that way and, at 5:50, he went over the west fence, after a tremendous dusting in the ashes of an old bonfire, and headed, I suppose, for his old house.

August 6th.

Rhody visits the owl early.

At precisely 7 A.M. I looked out my bathroom window into the court.(An overcast, dull morning). There was Rhody again prowling around the corner of the office, still "owl-minded". I went down and out in my pajamas; he followed to the door of the tool-house which opens into the court. I got a mouse for him, but he had gone all around to the east door--the accustomed place--to receive it. It was swallowed at once, and I left him. Shortly afterwards Julio had opened the outside door of the shop, which leads into the shop-yard. At 7:25, from my window, from which I can look down through the office window into the shop and

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*Pacific ?

through the shop door into the yard, I could see Rhody entering the shop; so I went down again. He entered the office from the shop and spent several minutes walking about the floor looking up at the owl on the desk Several times he crouched as if to fly up, but did not. He uttered no sound and shortly left.,

At 8 o'clock, guided by the birds, I found him sitting quietly in his "optimum tree" (where he had no "right" to be on a cool, cloudy morning!) surrounded by bushtits, wrentits, Bewick wrens and one spotted towhee, the three latter scolding--he paying no attention. (There he is now--9 A.M., while I am writing this note, in the shop.)

I went out and into the shop. He was looking, not at the owl which can be seen through the unfinished partition between the shop and the office, but at the multitudinous things--mysterious to roadrunners--with which the room is filled. He was very calm and quiet. I went into the office, sat down and placed the owl on the floor beside me. He began his head and tail gestures at once, came in cautiously, rattlebooed once, approached the owl within 3 feet, surveyed it calmly for a few moments, then began to walk about the desk, renewing gestures, then into the shop and out.

As far as known, yesterday was the first time that Rhody had ever seen the stuffed owl.

I forgot to record that, during the 7 A.M. episode, he once picked up a twig and considered carrying it up into a tree before dropping it.

The foregoing gives the physical facts up to 9 A.M. with regard to the roadrunner--stuffed owl incident as observed by me. It will be clear that the affair offers a field for interminable speculation, even in its present stage. However, there may be more incidents to come. In the meantime, though, whatever may have been the bird's motive in performing these acts, there can be little doubt but that we must concede him courage of some sort. The interior of the shop and the office is filled with many strange and mysterious--perhaps fearful--things from the point of view of a bird constantly in need of employing a defensive attitude toward all things which it does not understand. The interior of the office, gloomy on a dull morning, overhung as it is by oak trees with the windows screened by rhododendrons and only one tortuous avenue of retreat, inhabited by a fierce (though dead) enemy of birds and, for a time by me--whom Rhody trusts only with reservations, is a place to be penetrated with risk, real or imaginary; yet the bird--undoubtedly somewhat fearful--perhaps extremely fearful, braved these various hazards courageously, as I see it.

August 7th.

About 6:30 A.M. I could see Rhody's tail waving at the office window. He was looking at the owl again. For the next hour and a half he continued to hang around the court, but, when Dr. and Mrs. Reynolds brought Miss Richardson and Mr. Morris to see him, a little after 8, he could not be found. Miss Richardson was eager to see some of our California birds, so we took her by car on a loop through the southern part of this county, identifying 61 species and/or subspecies of birds, 20 (?) of which she had not seen before. At 5:30 P.M. we came back here to find Rhody, locating him at last in his house on the west lot.

August 8th.

Rhody was again at the office window when I looked out of

the bath-room window in the morning. The owl fascinates him. In the afternoon I was preparing it in the shop so that it could be stood up outdoors in order to get motion pictures of Rhody's behavior toward it, when he discovered what was afoot and tried to get in th through the shop window, running along the sill and tapping on the glass, but making no vocal sound.

Rhody and the
owl before
camera.

When the set-up was completed out of doors Rhody was gone, bu I found him in a few minutes and he followed me about 50 yards to the scene. He would not approach the owl nearer than about 5 or 6 feet and then only once, preferring to creep about on the edge of the shrubbery and in it on his belly, occasionally rattle-booing, and keeping 10 to 15 feet away from the owl, but not hesitating to come and stand by me or under the camera tripod. I did not get much. He stayed for perhaps an hour. Much later, when I carried the owl off, he followed into the office, left, made a wide circuit and then came in again through the shop, again booing. This owl has a strong attraction for him, but what it is I do not know.

Rhody takes
load of
needles to
house 2.

About 5 o'clock Rhody ~~xxx~~ was given his third mouse of the day. After his first mouse, in the morning, he gathered up a sheaf of pine-needles, presented them at the mirror and carried them--not to his new nest--but to the house in the eucalyptus tree. Perhaps this means that this house is about to be restored to favor again.

6 P.M. It did not; because at 5:40 P.M. he was already stowed away in his old house at the west lot.

August 9th.

Rhody was not seen hereafter his first appearance in the morning, until about 5 P.M. He wanted no mice and soon went to his old house (No.1). I was away several hours and he may have visited the owl during that period, but at no time was he seen to do so.

Arizona Hooded Oriole
nesting in this County.

From time to time during the past 2 or 3 years the Hooded Oriole has been reported as occasionally nesting 10 or 15 miles south of here and the birds have been seen (and caught) still nearer.

I was told by the Brocks of two nests of this year about 3 miles from here and went and saw one of them. They also told me of one more about 10 or 12 miles and, although I found the tree, I could not find the nest.

I therefore looked elsewhere in "my own territory" and, in 1½ hours, found six, of which five were of the year. One of them (perhaps more--I did not look carefully) contained young--at this late date.

August 10th.

At 9 A.M., while I was looking for Rhody, he came running after me from "nowhere". I gave him a very large mouse, for which he cried, and as it proved, this was enough for the day.

About 4:30 P.M. he ran swiftly past me, stopping as I spoke to him. He headed (as I supposed) for the tool-house but, when I got there, he continued on to look at the owl through the office window. When I went in he followed after me, booing. I offered him a mouse outside, but he passed it up and came and stood near me in what seemed to be an expectant attitude. Not knowing what else he might want, I went into the shop, thence into the office where the owl was, followed closely by him, with a boo or two. Apparently that was all he wanted, as he again refused the mouse--a small one--and soon wandered off toward house No. 1.

hotographing the
ooded Oriole.

Earlier in the day (about 9 A.M.) I went to the oriole nest known to contain young, finding several of them already out and flying about the palm tree containing the nest. One shortly flew to an adjacent tree. The female was feeding them all, including one (or more?) in the nest. The male did not appear during the 2 hours I spent there, but a second adult female did, causing some minor conflict.

It was especially noticeable that the mother had not the slightest difficulty in finding abundant food. While, perhaps due to my presence, she delayed often for several minutes in administering it, her absences to get more seldom exceeded a matter of seconds only.

seventh hooded
oriole
nest.

Incidentally, on the way out to this nest, I found a seventh one in the first tree into which I looked! This was several miles from the one photographed.

August 11th.

The day opened with thrasher song in which I recognised Neo's victoree phrase. The song was almost continuous for 1½ hours, ceasing about 8:30 A.M. This is, I think, the first "real" thrasher song I have heard here since July 8th? and that was short. Does this herald the arrival of the "Convention Season"?

hody's moult.

Rhody was away and not seen until about 1 P.M.: then he was at his interminable preening--one feather at a time drawn between his mandibles. His breast is now somewhat ragged. He wanted no mouse. Much of the rest of the afternoon he spent in the "optimum" tree. He was given another very large mouse--the only one of the day, and at 6 P.M., after a series of dustings, passed over the west fence on the way to his old house. Thus placing of nesting material in his No. 2 house did not foreshadow his returning there to sleep.

August 12th.

The day again opened with thrasher song.

and owl.

Rhody was given a mouse at about 9 A.M., he having "found" me at that time. He then went to have a look at the owl through the window.

ooded Orioles.

It was found that all of the young had left the nest and they were not seen in the vicinity.

eo sings after
unset.

Neo was heard to sing a few bars about 10 minutes after sunset. Thrashers are now appearing more often (?) at the Reynold's home.

August 13th.

Rhody home all day . A large mouse given him was given unusually long treatment, as if to make certain that it was dead, but perhaps also to make it easier to swallow. When only its tail and hind quarters could be seen he rejected it hastily and would not pick it up again. Later he was given a small one, which he ate quickly and, an hour later, after he had had another look at the owl, another small one.

Rhody again suddenly remembers the owl.

About 4:30 P.M. Rhody was preening and sunning in the spread-eagle pose at one of his favored spots east of the cage and near the north boundary. He had been there for several (?) hours. As I watched from a distance of about 50 feet he suddenly jumped to his feet, ran swiftly past me in the direction of the tool-house, continued through the shop-yard and jumped up to the sill of the office window to stare in at the owl. The distance traversed was about 60 yards in a direct line--longer by the route he followed, as he had to avoid trees, shrubbery and pass through two gates, making two right-angled turns. From where he was sunning nothing can be seen of the shop and office on account of the irregula topography and the shrubs and trees. The owl, being dead, could not attract his attention by sound or movement: further, it was back in the gloom of the office. Rhody had been fully occupied in his own affairs for hours and had not gone to see the owl earlier in the day as far as known. There was no occurrence evident to me that would tend to remind him of that creature. Apparently he just suddenly remembered the owl and deliberately went to look at it.

I now brought the owl out and he began to crawl around on his belly, approaching to about four feet. After 10 minutes or so of this he started off in the direction of the west lot, but came back and was given the second mouse.

There is now no longer any display over these animals.

hrashers.

Thrashers again sang in the early morning and there is evidence that they are gathering for the "convention" period.

August 14th.

Early song by the thrashers, but none during the rest of the day here.

Rhody home all day, making one visit to the owl. He had one large mouse and one small one and sat much in his optimum tree.

hody renews "belly- crawling" with J.

For the first time since it was commented upon herein several weeks ago as being a new development in his behavior, he crawled on his belly and wahnked when Julio offered him a mouse. It is to be noted that he crawls on his belly in the presence of the owl, but does not wahnk (or hahk). There is perhaps some correlation between this performance with the owl and renewal of it with Julio. I find that Julio speaks to him more roughly than I do and is more abrupt in his behavior toward him. The common element here seems to be fear.

Rhody again slept in his old house.

August 15th.

Thrasher song was heard about 5:30 A.M.

About 10:30 A.M. strikingly shrill thrasher song sounded from the vicinity of Rhody's house No.2 and more than one bird seemed to be there. I went down to investigate. One of the thrashers was seen sitting beneath the tree just outside the fence, doing nothing. At a distance of about 40 feet I made the gesture of tossing a worm. The bird came at once, only slightly timid, and was given worms. It was in almost perfect condition as to plumage and I though, what a marvellous improvement Neo has made. I went to get more worms and returned and Neo came out for them; but he was suddenly shabby again! The first bird was not Neo. It was, in fact, tamer than Neo. I do not know who it was. Possibly N2, although I have not seen her for weeks, much less had her approac me. Maybe the shrill song was hers.

Or it may have been one of Neo's surviving youngsters.

dy's moult.

When seen resting quietly and composedly at arm's length. it is seen that a large proportion of Rhody's body feathers have lost their tips entirely and some of them have have the tips merely frayed, as to the vanes, the rhachis being still intact. also there are now many gaps where his skin can be seen and he is shabby. I picked up a newly moulted rectrix of his: one of the middle ones, and an not now certain that all the old feathers in his tail have fallen out. There are several new ones about half grown.

He is now staying home most of the time and still sleeping in house No. 1 on the west lot.

He continues to visit the owl in the office.

August 16th to 18 th., incl.

Thrashers song in the morning continued and the birds are now seen at almost any time in and about the place, many of them stranger The confused singing of the "Convention season" is being heard more often.

Rhody remained in domestic mood during this period and did not fail to look up the owl each day. Once, when I saw him through the shop window to the north, I held up the owl for him to see and he immediately responded with a rattle-boo and came for a closer look not, however, crawling.

On one of these days he had three mice. He continued to sleep in house 1.

August 19th (Sunrise 5:27, sunset 6:59).

Thrasher "Convention"
ow in full swing.

At 5:10 A.M. I was first aware of thrasher song close to the house. From then until 8:30 A.M., when there was a short period of silence, it was one continuous chorus not, as is usual in the convention period, of the highest thrasher quality, there being at such times, more of the harsher sounds. At 8 A.M. I found the birds had gathered in the trees near the cage--a place much favored in previous years. I could distinguish three different songs simultaneously, all on different themes--no two alike. I could also see not less than two others with certainty at the same time who were silent. There were certainly not less than 5 present and undoubtedly more. One of the silent ones, seen briefly at 10 feet distance was almost certainly Neo. At 8:30 song ceased completely and I thought the birds had gone away, so went out to investigate. In about 5 minutes one was heard to scrip; then full song of another was heard about 20 feet from me in a small oak across the driveway from the old oak. This bird, who was not Neo, remained singing without shifting position for about half an hour right in the heart of Neo's most sacred territory. He would pay no attention when I tossed him worms, and his song was "new". The "scripper" moved about from tree to tree and could not be approached closely, but was almost certainly Neo. He was joned by another (N??) and they foraged.

Thrashers were now "everywhere" again and I located 5 singers, all going at once and none--as far as I could determine--using the same phrases. They were not now in the same tree or group of trees. At 10 A.M. they were still at it, but shifting from place.

While stalking one of them I heard a sound behind me and Rhody stepped out of the bushes, immediately assuming the "open bowl" sunning pose as if pretending that he had no other purpose in mind for joining me. However, when I headed for the tool-house, he trotted along behind and was given a large mouse. It was too large

and, although he picked it up by the back of the neck(without injuring it) he dropped it hurriedly and came to me for another. He was given a smaller one which proved satisfactory. I left to watch the thrashers and, about 10 minutes later, Rhody was seen entering the shop and sneaking quietly into the office to have another look at the owl at close quarters . He was pretty calm about it.

After writing the above note I went out again, finding Rhody now in the glade in the spread-eagle pose (10:40). Again a rustle behind me and a thrasher was seen in the sage patch. A tossed worm brought him running toward me promptly and confidently and I gave him all the worms I had. (And I had about decided to make a note to the effect that all thrashers here were now very wild!). This thrasher--I do not know who he is unless he is Neo after a miraculous transformation in his plumage--is a perfect creature with all those taught and subtle curves that delight the engineer as indicating disposition of structural material where it will do the most good and, at the same time, allow for accidental reversal of stresses. This thrasher was also curious abou Rhody and approached him as near as he dared making low comments. (These notes of today show how useful banding would be under present conditions. I am not certain of identifications).

11 A.M. Thrashers everywhere about the garden. I can account for 5 at the moment--several of them singing.

By noontime all song had ceased, but thrashers were seen frequently about the grounds during the rest of the day and the new(? one (or the refurbished Neo (?) twice again accepted worms.

Rhody could be accounted for at almost any time and occupied his old house for the night.

August 20th.

rasher convention continues.

In the early morning hours thrasher song was renewed, to subside for a half hour and then resume for nearly the whole forenoon. Three birds seemed to be the principal performers, but others were also seen quietly "listening" or foraging. So far there has no chasing seen and no display of combativeness. Neo's song has not been recognised amongst the others.

Unlike the preceding days, the convention was renewed here during the afternoon, for several hours, with other thrashers again seen not participating. The new(?) thrasher again accepted worms--three times in fact.

rashers eating elder berries.

These notes--long ago--have--I think,recorded every instance of thrashers eating fruit. These have been rare, perhaps three in 5 or 6 years. However, during the past week, it has been observed that thrashers are frequently in the elderberry bush at the old oak eating the berries greedily and apparently stuffing themselves. Once I saw Brownie in this bush eating one or two berries and leaving quickly.

Rhody ran true to present form: staying home all day, loafing, preening and sunning. Feeling himself neglected about 4:3 P.M., he came down from his optimum tree and "found" me near the western fence trimming trees. He loitered around me until I told Julio to go to the tool-house and get him a mouse. Rhody followed him promptly and was suitably rewarded. In a few minutes he was back again and actually changed his course to come and stand near me again for a few minutes, apparently wanting nothing. He slept in his old house.

August 21st.

asher convention
still on.

About 5:30 A.M., continuous song of thrashers was heard nearby, coming from several directions. During a lull about 8 o'clock, I went out to investigate. Four thrashers were found in a small oak by the shop-yard wall. Rhody was gathering pine needles directly below them apparently oblivious to their presence, intent upon his own affairs. (He took a sheaf of these needles to house No. 2--yet he will not now sleep in that house). The four thrashers were not singing, but "talking" and moving about in the tree, although there seemed to be no hostility. Another thrasher was singing continuous full song from a pine about 40 feet to the north, and still another in a similar tree about the same distance to the south. They all gradually dispersed and the rest of the forenoon was quiet.

ew" thrasher
Neo .

About 2 P.M. I heard Neo's unmistakeable victoree, victoreea phrases in a song toward the glade. This gave an opportunity to see if he was the "new" thrasher. He is not. Although much improved in appearance, he has still a long way to go before he is as sleek and finished in appearance as that bird. He is still very shy. While trying unsuccessfully to get him to take tossed worms another thrasher was "talking" in the bushes behind me as one thrasher does to its mate. Perhaps N2; so the present guess is that N2 is the "new" thrasher. However, "she" did not respond to my efforts either.

Rhody was home most of the day, had one mouse and slept in his old house.

August 22nd and 23rd.

nvention
ontinues.

I left about 9 A.M. and returned at 5 P.M. on the 23rd. Thrasher song was first heard about 5:10 A.M. on the 23rd. Before I left the convention had begun to assemble in and about the pine near the cage. On my return Julio informed me that, on both days, there had been "too many thrashers" and the convention had convened as on previous days recently.

Rhody had run true to form and demonstrated that, if he is hungry enough, he can eat the large mice that he has frequently rejected lately.

August 24th. (Sunrise 5:32, sunset 6:52).

I first heard thrasher song (near my window) at about 5:30 A.M. It gradually ceased and, at 8 A.M., little was to be heard. (The birds were probably busy foraging).

About 9 A.M. it revived and, at about 9:20, fine song of a single bird was located in the acacia at the cage, I went and sat down nearby. Rhody, after having a huge drink, was off about a hundred feet sunning.

Tree

Soon other thrashers began to assemble, the acacia and the adjacent by the lone singer being the focal point. Shortly I could locate 4 birds altogether, some of them having announced their approach by scripping, thus enabling me to trace them and sometimes see them travelling along the ground. Songs now increased in number; the original singer maintained his place in the acacia singing almost continuously. There were probably other thrashers present besides those located by sound, as is usually the case. Bird No. 1 was manifestly the one that attracted the gathering and it is perhaps no more than a curious coincidence that--insofar as my offhand

recollection serves--his song was the most like Brownie's of any other thrashers I have heard (Barring Greenie's, which, as the notes show, was considered to have been derived from Brownie's). For the first time since Brownie's demise, or rather since Brownie was first listened to, I heard some of his phrases from another bird--again excepting Greenie. Notably present were the tork-peelya and torquita phrases and, I think, some of the "incidental music".

About 9:45 the other thrashers had drifted away and this singer occupied the immediate territory as the only singer. I was now mildly astonished to see Rhody climbing up toward him. Although he frequently sits in this tree, it is lower down, but he now went up fully 30 feet, as it seemed, to get nearer the thrasher. For a few minutes song ceased, but to be renewed again in full volume from the same position. I now went to the tree to see what Rhody was doing. He was hard to find in the dense foliage, but he was sitting quietly on a small limb, apparently listening to the thrasher in most respectful attention! There had been no disturbance of any kind--no hasty movements and, while I watched, there were no threats. Some place or other in these notes, I think, there is recorded an instance (or instances) of Rhody's having been definitely attracted by the song of Brownie.

At 10:10 the thrasher left to resume song farther to the east. This ended the convention, at least here, for the day.

hody and the
en (?) jay.

About 3 P.M. I found Rhody in the cage plainly not entirely at ease, for he was standing quietly on the ground, raising and lowering his crest rhythmically with neck stretched forth and gazing intently to the west. After several minutes of this he came out carefully concentrating his gaze high up in the pine by the cage. He walked under it, came to rest and, for perhaps ten minutes, continued this scrutiny. I examined the tree from all directions, but could see nothing, so went to look into trees further to the west. No sound came from any of them, but I detected some slight movement in the fourth tree 30 or 40 feet up and a jay flew from it back to the third tree. Rhody now came out and joined me at the fourth tree, peering up into it . He now went back to the third and stared up into that, then started to climb it, reconsidered and went over the fence. The jay now returned to the fourth tree and still made no outcry. Ordinarily Rhody pays no attention to jays and it seemed probable that there was some other creature which aroused his attention. To develop the situation I got a BB gun and fired it up into a branch in the fourth tree. The jay flew off screaming. Rhody startled, moved off two yards. Nothing else happened and Rhody composed himself to preen. I am inclined to the view that Rhody was unable to see the jay any more distinctly than I: he was aware of something up in the tree, was naturally cautious, but relaxed when the mystery was solved.

He had three small mice today and was followed as he went to the old house for the night. He entered it at precisely 5:45.

August 25th

There was early song by thrashers which, by 8 o'clock, simmered down to a long solo by Neo in the vicinity of his group of nests. The victoree phrase was of frequent occurrence. He succeeded in attracting only one thrasher, presumably N8; so the convention did not form today.

Rhody had a small mouse and a peep at the owl in the forenoon and was much in the upper garden and the low part of the roof. In the afternoon he came and watched me trimming trees near the living room west window, for about an hour. He negotiated a large mouse successfully.

August 26th.

The day opened with thrasher song, which again concentrated into continuous song near Neo's nests. For a time it seemed as if yesterday's experience would be repeated and Neo remain without visitors; but about 9 A.M. things began to warm up and, until a little after noon, we were treated to the most enthusiastic chorus of thrashers ever heard at this place, so far as my recollections serve.

It is impossible to do it ample justice. The place was "full" of thrashers. I do not know how many there were, but I could easily place four singing at a time and others moving about on the ground and in the trees in almost any direction I looked. There seemed to be no conflict among them at all. With glasses I could see no~~r~~ bands on any of them, nor was a broken bill to be seen. About 9:45 I concentrated upon one bird, it was all so confusing. This one sat across the road from the old oak and sang so much that he did not bother to close his bill at all during pauses. He kept his tongue retracted as if that position insured more resonant song. He was a very fine singer, versatile and rich, in full plumage except that some of his rectrices were not fully grown. His eyes were adult in color. After about 20 minutes he spied a thrasher in the sage patch and sailed down to investigate. There was a little dodging and side-stepping, but no real pursuit or attack. This lasted a few seconds. Both birds remained in or near the sage. I made a back-handed worm-tossing gesture (without a worm) when I thought this singer was looking at me. He responded at once, ran toward me and picked up the worms. When he had had enough he and the other thrasher went off into the orchard. Song was now heard from a small oak at the oval lawn. I went there and stood 20 feet from this bird. Another approached from the east and sat in the pine 40 feet away, also singing. Another came from the north, sat in a pine north of the house and struck up and independent aria. They were all good. It was impossible to distinguish with certainty any one phrase which they all had in common; but the second thrasher to arrive seemed to pick up, after a short time, a singularly rapid and odd utterance of the first bird which possessed a complex rhythm . There was nothing to identify the first bird with the one I had been concentrating upon, either as to song or appearance. But, after a half hour of this, he dropped to the ground and another tossed worm brought him to my feet, so I suppose he was the same bird.

(In the meantime Rhody had joined us and sat nearby pretending to listen and preen, but really waiting for signs of my "loosening up" on the mouse situation. He was accommodated. Wrentits had escorted him to the concert).

Song now shifted to the oak in the middle of the court. Four birds were present. The last to arrive had a rough neck and said victoree, but he made no attempt to justify the assertion. I suppose he was Neo. All now quieted down and I left for an hour.

At 11:40 the affair was in full swing again in the pines along the north side of the house. One came down and began to walk about stiff-leggedly with bill pointing upward. Three others followed. This attitude was more or less that of all of them. They all talked in low tones and walked about 15 to 40 feet from me in plain sight. There was no skirmishing. They separated into two pairs (perhaps mates) and went off gradually in this formation, in opposite directions, about 12:20. As developed later, this ended the day's group action at this place, but occasional individual song was heard from Neo's nest area.

These affairs often attract other birds, notably hummingbirds, but also jays, wrentits of course, brown towhees, wrens, bushtits and Rhody. Also, when the focal point was in the court today, a thrush climbed the tree to investigate (species unidentified).

All of these birds--Rhody less frequently than the others--go up into the tree where there is the greatest concentration of thrashers. The hummers buzz over their heads and dive down at them; the jays sometimes are quiet, but sometimes make a frightful din and act as if there were a snake present.

At one time today, also, two tanagers went into the tree occupied by one of the singers, but as they foraged there, I think they were merely seeking food. (They caught insects, which I could see in their bills).

hody abandons a
ouse in favor of
meat.

Late in the afternoon, at which time R is usually able to negotiate a large mouse successfully, he was given a big one. It was a tough one that took a lot of killing followed by much subsequent "limbering up". R then undertook manfully to swallow it, but had to give up (or preferred to) disgorging it hastily, then to my surprise, ran swiftly to the cage and got a piece of meat. Hr again slept in the old house.

August 27th.

Convention
continues,

The day again opened with thrasher song, mostly by one bird, but others were scripping not far away. About 8:15 there was no song, but 5 or 6 thrashers could be glimpsed down on the baccharis slope to the north. Loud song now came from the old oak and a thrasher was occupying the highest snag singing with back to the breeze (which ruffled his feathers) facing north, where the other thrashers were. This seemed to offer an opportunity of getting some light upon the reactions of the other thrashers (about 100 yards away) to the song of a single bird presumably singing from his own territory. (Although I can not say that this bird was Neo). (One "theory" at present is that all this is a manifestation of territoriality). After about ten minutes of song, an answer came from the north and a thrasher began to sing from one of the pines by the north fence. For sveral minutes the two birds sang alternately, then the bird on the oak dropped to the ground and ran toward the pines, stopping however, in the open space by the shop north wall. Here he walked about stiff-leggedly with bill in the air and the other bird joined him, both birds walking about in the same attitude talking and singing--the song being of about the order of quarter song, with no harsh notes. There was no clash; the birds did no circling about each other and never approached closer than about 3 feet and then only in passing. A third thrasher now came from the north and all three went up into the pine at that place and maintained a continuous low conversation mixed with undersong.

(Rhody now appeared upon the scene escorted by several hummingbirds who dived down at him, but never struck him. (Julio says there were 5). He ignored them completely, paused as if to listen to the thrashers, then accepted an invitation of J's to have a mouse, thereafter going to a lath screen over an ailing rhodendron to preen. I went to him, stood three feet from him and exhausted my road-runner vocabulary upon him. He listened with every appearance of respectful attention, but made no verbal response and fell to pulling "dandruff" off of his feathers).

The thrasher tea-party was still in being as I left to make this record. (9:50 A.M.) It was a much less vociferous affair than yesterday's with fewer guests.

10:30. Everything quiet thrasherwise; but, based on past observations, this does not always mean that the birds have dispersed.

At 10:40 Rhody was lying in the sun on another lath screen.

I went up to him and talked to him. The Sandman came and he drowsed, his lower lids creeping up to join the upper ones. It is a rare thing to see Rhody with his eyes closed. He is, of course, getting older. He has been here now four years and four months, plus. His skin-patch colors are distinctly less brilliant, especially the red. Using Archie and Terry as yard-sticks: Rhody must have been not less than two years old when he came(in April) and certainly is now at least in his seventh year.

During the rest of the day he remained at home. I thought the one large mouse given him in the forenoon would "last" longer than it did. However, about 1 P.M., he went into the cage and came out with a piece of Hamburger the size of my thumb and gulped it down. About 4:30 he went in and got another and, about 5, he came down from his optimum tree and stood waiting near me until I started for the tool-house, when he quickly followed and had a second mouse. After this he decided to look up the owl. At a point where it was necessary for him to decide which of alternative routes to take he paused, seemed to consider the matter, and chose to invade the stuffed owl sanctum by approaching through the shop. The act was accompanied by impertinent gestures of head and tail. He appears much less humble in the presence of the owl now. I hope he will not judge living ones by his experience with this. Probably this education is not good for him.

There has been no display with mice for a long time (I.e. since last recorded in these notes) and no presentation of one at the mirror. His attitude toward them is now strictly utilitarian.

He occasionally glances at himself in the mirror indifferently, but the bird he sees there, except during the breeding season, has no attractions for him. It is a year or two(?) since he last performed his mirror dance at any season. (See notes for elapsed time).

August 28th. (Sunrise 5:35; sunset 6:47).

At 5:25 A.M. thrashers had already begun to sing in the distance and there was little evidence of any tendency for song to concentrate in any one locality, at this time. This is perfectly normal even at this, the "Convention Season", for according to past observations, there is always scattered, sporadic song some hours before the birds begin to assemble at some particular spot.

About 7:30 a tendency was noted for thrasher sounds to concentrate in the baccharis slope on the north side of the spur on which this house is situated; but there was no sustained song. Even this died out before long and all was quiet in the thrasher realm. Presumably the birds were intent upon foraging.

I was keeping close watch upon the birds so that, in the event of a "Convention" developing of sufficient impressiveness to illustrate unmistakeably this seasonal habit of the California Thrasher, I was to notify the Grinnells according to arrangements previously made.

About 8:30 there were indications to the west that the birds were going to gather there instead of in my garden as has been their habit on such occasions; but this preliminary affair (as past observations indicated it would be) also faded out (as it "should" have). This season the gatherings have been most frequently at about 9 A.M. or a little later. This time was reached and the indications now favored the west slope again.

The Grinnells had meanwhile indicated that, notwithstanding the unfavorable prospects which I reported to them, at the moment, they would take a chance and come over.

When they arrived I was in the cage with Rhody, who was playing with the magpies. I was in there to keep him from eating the meat, which he was disposed to take, since I had purposely not accepted an earlier hint from him bearing upon the mouse question, and wanted to preserve him as Exhibit B showing a hungry road-runner performing on live food. We deferred further attention to Rhody (knowing that he would keep) and went to investigate the affair to the nest, which we found progressing, with no particular enthusiasm on the part of three(?) thrashers. There was considerable song, but no one bird seemed to have anything special upon his mind and the one bird who perched in plain sight for several minutes refused to respond to offers of worms. I then stated that, what was needed to bring about a real convention, was for one thrasher to perch upon a tree near the house and sing as if he meant it. We should then have something happen if precedent were to be followed.

We now went back to look up Exhibit B (the thrashers being A, and found Rhody quickly. (He was really coming to look for me). He followed promptly to the tool-house, a little embarrassed by the presence of visitors, suddenly thought of the stuffed owl indoors, and branched off to the shop, which he entered in pursuance of the idea which had just occurred to him. However, on being shown that, this time, he could really have a mouse, he abandoned the owl idea, came back, took the mouse, ran off with it a few feet and swallowed it, still kicking. He was going to take no chances.

Meanwhile, the thing I had been hoping for (and really expecting) occurred. Viz: A thrasher came and posted himself in the pine south of the shop, about 40 feet from us, and began to sing loudly in full view. But the Grinnells had to leave: MSS needing attention. As they drove off encircling the house, another thrasher came from the north. I headed the Grinnells off as they were about to "escape" saying that "they" were coming; but "discipline had to be maintained"; so they departed.

Now I am going to send J.G. a copy of the so raw notes of August 28th, 1938, A.D. just to illustrate one of the advantages in being an engineer of no particular reputation as against being a scientist of eminence--for here is what happened immediately after they left--or began to happen:

(1) I disposed myself comfortably in a chair near the cage: the most probable focal point of expected events, at about 10:15 A.M. The sun was brightly shining. Tanagers were in the surrounding trees (The third successive day).

(2) Thrasher A (from the pine south of the tool-house) transferred to the "old oak" behind me, still singing.

(3) Thrasher A shifted to the sawed-off pine 30 feet in front of me, still singing, as was B in the pine by the cage, 20 or 30 feet from me.

(4) More thrashers from the north joined B.. Three birds singing there.

(5) A thrasher joined A in the stumpy pine. They "talked" in low tones.

(6) One of these dropped down, started to run across the open in front of me. I made a back-handed gesture as if to toss a worm. He halted in his tracks. Another flick of the wrist and he ran to me and picked up worms at my feet. He was so close that my knees cut off my view of him. I filled him up.

(7) He ran to join B.

(8). They all talked high in the tree.

(9) I went and stood under the tree. There were 4 thrashers to be seen up about 40 feet, close to the trunk, moving up and down among the branches which are arranged spirally (or rather, helically) around the trunk, like "spiral" stairs. There was no conflict.

(9) I looked over the low wall which my neighbor has built against my wire fence. Three more thrashers were on and around the lawn: some foraging and others evidently interested in the main convention. This makes seven thrashers accounted for at one time. The birds on the ground, at one time or another, all took part in the convention by moving up into the closely grouped trees. Some sang and some did not. As they began to disperse, as a result of a towhee alarm call, the singing in the tall pine ceased for a few minutes, eventually being confined to one bird. Song was now (about 11:30) [illegible] where he had his three nests of this year. For several months past Neo has run away from me on sight and I have wondered whether he had come to associate me with the disasters--some of them complete--which overwhelmed his three nesting activities.

The song did not contain Neo's copyrighted "Vic-to-ree, vic-to-ree-ah" phrases, but the location is pre-eminently his alone; so I went down to see if I could re-establish contact with him after this long period of estrangement. As I approached the song ceased abruptly. I crouched down at the end of the little "varmint trail" through the tiny sage patch where he used to come to me regularly, and placed my hand, containing worms, palm upward on the ground, just within the fringe of sage. Soon there was a slight rustling sound approaching gradually; then soft flutings, just as Neo used to make. An immaculate thrasher came forward timidly through the brush. (Neo when last positively identified looked like a potato with chicken feathers stuck in it at random--an appearance continued from late last year when he began to fight other thrashers , beak and claw, face to face, for dominance in this territory(my home place).

He would not take the worms from my hand, lacking the courage to make the last reach forward, so I dropped them for him and he took them, still talking. No doubt it was Neo; but such a Neo as has not been seen (with certainty) for months: newly outfitted as to apparel. I suspect he was the thrasher whom I interrupted on his way to join thrasher B shortly before.

(10) At 1 P.M. song again sounded from Neo's sanctum. Again I went there and the actions were repeated as before; but this time, Neo ate from my hand with almost perfectly restored confidence. To me, this was the event of the series just recorded.

(C.C. of the foregoing to J.G.).

Unusually late
[illegible]
convent'n.

8:30 P.M. The foregoing events closed the convention for the day, I thought, based on precedent: but, at 6:45 as four of us (P.S.A. and family) went out into the garden, a thrasher was singing full song near the cage. As we waited there, not less than three others came. Song continued until 7 P.M. and ceased abruptly. One of the birds could be seen running off toward the center of Neo's home territory.

Rhody was home all day doing the usual things, including at least one visit to the owl.

August 29th.

Thrasher song was heard by me at 5:25 A.M. and continued from some place in the garden until I had to leave about 9:30 A.M. and could not observe subsequent events. However, at 8:45, apparently in response to the song here, other thrashers began to assemble

and, when I left, four were engaged. On returning about about 10:30 I found everything quiet.

This proved to be a rather warm day (Max.88°), considerably hotter than yesterday; perhaps this has some bearing upon the short duration of the convention.

Rhody has now, apparently, added another link in the coming-for-a-mouse chain: for now he almost invariably hesitates, before actually reaching the tool-house door, and stops to consider whether he shall keep on and have a look at the owl indoors, or come and get his mouse. Usually, now, both attraction are given proper attention on such occasions, and the problem seems to be: which shall have precedence.

He had three pieces of meat today and two small mice. He slept again in No.1.

August 30th.

o convention as yet.

11:15 A.M. The beginning of a hot day apparently--80° at 10:30. As yet there has been no thrasher convention and almost no song--even distant. Has temperature some bearing?

Rhody presented himself for a mouse about 9 A.M. Even at that time he was giving preference to shade. About 10:30 he was in the shade of the north wall of the shop (and off~~f~~ice). I went inside and held the stuffed owl up to the window. He raised crest and made head and tail gestures. I lowered the owl so he could not see it. He came up to the window sill and peered in. I raised the owl (about 3 feet from him). He dropped to the ground at once, did not run off, continued to stare up at the window. I went into the adjoining shop, without the owl. He came up to the sill to look in, running along the sill, which is about 12 feet long (a long,low window to distribute north light along the bench). He got tired of this in a few minutes and departed.

Rhody and glass windows.

Rhody seems to understand fully that glass presents an obstacle beyond which he can not go and has never been known to make the mistake of trying to get through it. But, at the same time, he does not appear to be able to gauge accurately (say within fractions of an inch) its distance from him; for, as in the case of his being on a narrow window sill, he invariably knocks the tip of his bill head [illegible].

Rhody seeks the shade at moderately high temperatures.

1:30 P.M. (Temp.83° in the court; 92 in the cage, in shade). Rhody, in the shade not far from the cage, reacts to temperature conditions by standing with bill open, panting; but he remains bright, active,and attentive to passing events. As a resident of the Bay region he would undoubtedly find conditions trying in the areas where most of his tribe are to be found.

Rhody stayed home all day and had one more mouse: a rather large one, which he had to reject once hastily (because it either bit him or kicked too hard)when it was almost out of sight in hi[illegible] gullet. He considered it doubtfully, but waited for it to d[illegible] allowed a good margin in addition, then swallowed it with e[illegible].

There was no thrasher convention all day and these birds, if present, were silent. A light afternoon breeze from the ocean held the maximum of temperature down to 84°.

August 31st.

Thrasher song was first heard at 5:15 A.M.; a much cooler

morning. Song seemed to be by only one bird. By 7:30 it had shifted to Neo's private area . By 8 it had ceased, and I found a lone thrasher digging industriously at the base of a fuchsia an- the external angle where the north walls of the shop and the office meet. This bird did not accept worms and kept on digging until Rhody butted in from nowhere and gobbled all worm offerings, thereafter following to the tool-house for small mouse. He then retired to his presently favored lath screen to digest and doze.

ody "
butts in"

At 9 o'clock a thrasher was singing full song continuously from the iron-wood nearest the oval lawn. For 15 minutes I could recognize no familiar phrases, but, by a series of almost imperceptible gradation he modified one particular phrase until it became neo's unmistakeable victoree, which he continued to introduce in his song at frequent intervals up to 9:30, when he flew to the west. He could now be heard renewing song from post to post, working west and north, then east. I was busy on the south slope, so did not check up on him at the north; but, in one hour, he was back again singing in the ironwood adjoining the first one. Another thrasher was now eating silently at the oval lawn feeding station. I thought this bird probably N2, It worked gradually toward the singing tree and, before climbing it, was induced to come to me for worms. Neo had now shifted to the pine just east 20 or 30 feet and the second bird climbed the tree to join him, remaining there when Neo shifted to the pine near the cage which, in notes long ago was called the Sparrowhawk pine.

The evidence so far pointed to Neo's having been following the course which usually (at this season) results in the gathering of a convention, but with no success beyond attracting his mate(?) N2. (Informally we call her Long-tail here, because of the contrast between her and Neo when he was bob-tailed).

Neo now (10:30) struck up full song from the SH (Sparrowhawk) pine and was joined by another thrasher while the suspected N2 remained in her pine and answered with full song responsively. More thrashers began to gather and, by 11 o'clock a convention was in full swing. Temperature in the court was 69°, in harmony with yesterday's thought that a hot day discouraged song and conventions, but, of course proving nothing. N2(?) now began to near the SH tree, singing from the old oak for several minutes first. There were now 4 thrashers in full sight just north of the wall, digging in the lawn and shrubbery. One of these, on invitation, mounted the wall and ran along its crest to take worms about 6 feet from my face. (Neo). With him in the group that now assembled on the lawn, two other birds--leaving one to dig by itself--and Neo began that odd stiff-legged march back and forth, near to each other, but avoiding conflict, with bills raised toward the sky. N2(?), with whom I had been keeping contact by ear, was gradually approaching and now joined the group on the lawn, but did no marching. There were now five thrashers in plain sight: three of them at one time or another marching or foraging. To check up on N2 as being the bird I had fed but a few minutes before on her way to join Neo, I induced her to come to the top of the wall and come to me for worms. Thus, of the 5 thrashers, two were at least friendly and relatively tame, whether my identifications are correct or not.

Most of the birds joined in the continuous flow of conversation at one time or another, but none of this talk was such as one hears between parents and young, whether in or out of the nest, up to and including the period when they are being chased away.

About noon the birds began to drift away in various direction and quiet reigned. It appeared that the convention was over; but in a few minutes, song again sounded from the acacia at the east end of the cage. This was answered by talk from N2(supposedly) from

approximately the location of Rhody's optimum tree and thrashers began to reappear upon the lawn.

Rhody [illegible] [illegible], [illegible] [illegible]. [illegible] circus in and about the trees and through the bushes near N2, with elaborate figures of eight and miscellaneous conic sections, rattle-booing with wings spread, at top speed. He as suddenly subsided, walked meekly past me and climbed the tree from which Neo was singing, but only to the height of the cage roof, where he stepped across to preen industriously with no evidence of awareness of surrounding activities. The impression given was that he was bored by all this nonsense of the thrashers and sought relief by giving vent to expressions of contempt and physical evolutions designed to show those birds what a real bird can do when occasion warrants! (I do not guarantee the correctness of this interpretation).

After luncheon I found that Neo had wandered farther east and was now off towards the Robinsons' still singing and occasionally using his victoree theme (1P.M.). (70°).

During the rest of the afternoon he was heard to sing several times from his intimate,nest area: songs of fairly long duration. This particular spot is again becoming a favored singing and resting post.

Rhody continued true to seasonal form: No singing, nest-building, display on receiving mice or carrying them about; no posing before the mirror; much loafing and preening and little wandering abroad--if any.

September 1st. (Sunrise 5:38; sunset 6:41).

Thrasher convention [illegible].

Thrasher song was first heard at 5:32 A.M., when a bird began to sound off near the west end of the house. By [illegible] A.M., song being almost continuous somewhere in the garden meanwhile, it was clear that a convention was assembling. The sky was overcast, but cleared shortly after 8 o'clock.

The sparrowhawk pine was the principal focal point and the convention lasted until about 1 P.M. At one time 5 birds were in sight and one was singing overhead. It was believed that these 6 composed the entire gathering. The affair was much like yesterday's, with the addition that one or two mild chases of short duration and distance were seen. The chaser in all instances was the last bird down from the tree. He seemed to object to other thrashers coming inside the little, two foot high fence that encloses a child's play house close to my north line. This area: about 15' x 20', was temporarily claimed by him as foraging territory. When other birds entered he was satisfied by merely driving them outside the fence. There were no contacts and apparently no particular animus.

Two birds seemed to be the principal singers; the others were more concerned in hunting food, but occasionally they got together and there was considerable talk with some posturing like yesterday's. Once two birds confronted each other a three feet distance with bills raised toward the sky; but the pose was soon abandoned. They gradually dispersed, with Neo however (and perhaps his mate) appearing to remain here in their own territory. In any case, Neo stayed and sang much until about 5 P.M. During the convention, he again came to the top of the wall and took worms (this time) three feet from my face.

Rhody comes back to sleep in No.2 again.

Rhody showed no departures from recent form, except that he [illegible] was frightened (?) from No. 2; but, to my delight, returned to No.2 in the peppermint gum tree.

This was a day of about the same temperatures as yesterday.

September 2nd.

minor convention.

Thrasher song was first heard at 5:35 A.M. By 9 A.M. the beginning of a convention, apparently called by the lone singer at home, was heard in the pine trees along the north fence. However, only one singer and two silent birds could be located. The singer was identified as Neo and at least one of the others was probably N2, since she followed Neo up in to the pine, as is her custom.

About 10 o'clock, Neo sailed off to the northwest landing about 200 yards away, down at Dr. Moore's, and renewed song. The other two were seen to start in that direction as if following. I now left, returning at 3:30 P.M. No thrashers were to be heard or seen, and Julio reported that they had not gathered again, as far as he knew.

hody to bed
t 5 P.M.

Rhody again slept in house No. 2. He was found already settled there at 5 P.M.

September 3rd

No early song.

No early thrasher song was heard. A dull, chilly morning: 54° at 8:45. That time marked the commencement of the first thrasher song of the day here. The singer was Neo, in the pine south of the tool-house. Soon N2 (?) ran to his tree from the oval lawn and climbed up. Occasionally she uttered a phrase or two.

onvention
ssembles.

More song was now heard north of the house. Three birds now. Another struck up. At first I thought it was a black-headed grosbeak song with variations--something I had never heard before. I went and saw the bird: a thrasher. For the 15 or 20 minutes he sang the grosbeak motif distinguished him clearly from all the other singers--now three in number. The number, including non-singers--now increased to 5 certainly, 6 less certainly.

At 9:15 all song ceased and no thrashers could be seen. At 9:30 Neo (?) mounted a little three foot oak 50 feet from the nort fence and began to call and sing, looking in all directions as if hoping to see others coming. 5 minutes of this without response of any kind and he quit. 10 minutes later he adopted the pine north of the kitchen as a singing post. Here he had better luck and the thrashers began to gather near him again, but in other trees. I now had to leave.

Returning at 10:30, I found all quiet, except for two thrashers (mates?) talking in the shrubbery about the oval lawn, in low tones. One came out to get worms from me and, curiously often dug in the ground by them before eating them. Shortly afterwards, after he had returned to the shrubbery, the other came out into the driveway near where I sat and also accepted worms. (Neo and N2?).

Neo went to the sparrowhawk pine and started full song. (This tree partly overhangs the Nichols' back lawn). The lawn was full of robins, about 20, perhaps a third of them juveniles still with their spotted plumage. Among the robins was one thrasher foraging. The robins took angleworms, the thrasher some other kind of worm (cut worms?). More thrashers came. Scenes of day before yesterday were repeated; 6 birds concerned (almost certainly), 5 birds (with absolute certainty). Not less than three good singers. Except for the singers, the principal objective seemed to be food. When Neo joined the bird on the lawn and in the surrounding shrubbery, stifflegged posturing by him and anther followed, but no conflict. For the first time it appeared that Neo wished to lead this bird back over the fence. He made what appeared to be a dozen efforts to induce
following

following, without success. Finally the bird came over the anyway and Neo came up to the top of the wall, ran along it to me for worms.

With occasional quiet periods, this convention lasted until 1 P.M. At 1:05 none were to be seen or heard. At 1:15 I heard mates (?) talking softly just outside the fence. A tossed pebble brought one to me for worms. Neo.

[illegible]

Since 9 o'clock Rhody has not been seen. Presumably he is off on tour (after having eaten all his meat). Both yesterday and today he was still in his bunk at 7:30 A.M.

About 2 P.M. song came from Neo's inner sanctum. After about three quarters of an hour it ceased and I went down to investigate. There was no sight or sound of him. I called and soon he came through his passage in the fence just as he did months ago and got worms from me, talking to a concealed mate. It was like old times. In appearance now he is without a blemish and I shall have to discover some means of identifying him other than his song (which is always changing) and his attitude toward me.

After I left him song was resumed and kept up until nearly 4 o'clcok.

Rhody back.

etires at :53½.

About this time Rhody made himself known for the first time since 9 A.M. He had already eaten a second lot of meat, but was ready for a mouse. At exactly 4:53½ he entered house No. 2 for the night.

Brokenwing

Mr. Sampson says that this bird (father of Okii and Chiisai) often referred to in these notes, and formerly an occasional visitor here subsequent to my abducting his children, is now at his (S's) home in residence again with his mate (presumably) Longbill.

rokenbill.

BB shows dapta-ility.

It also develops that this bird is also at Mr. Sampson's. It will be recalled that he disappeared from here shortly after he had learned to come to me for worms and was never seen again. Mr. S says he has adopted the strategy of robbing the robins when they discover worms--a consequence of his disability in the matter of digging. Here is capacity for adaptation: thrashers are not normally robbers of other birds.

During the thrasher conventions I have frequently looked for banded bird (Okii and Chiisai) and Brokenbill, Brokenwing and Longbill; but have not seen them. Now that BB, BW and (probably) Longbill are at Sampsons but do not come here, it encourages me to believe that O and C may still be alive. It is curious, however, that none of these birds should be attracted by the convention notices broadcast by Neo; especially as all of them know the place, and full thrasher song can easily be heard over a radius of a quarter of a mile and more by human ears.

Thrashers and cut-worms.

Mr. Sampson has also observed that the thrashers and robins on his lawn seek different prey: the robins taking angle worms and the thrashers apparently the cut-worms that, at this time of the year, are causing the grass to die out in spots. This confirms observations at this place. (Max. temp. today 68°).

September 4th. (Sunrise 5:41; sunset 6:36).

Thrasher song first heard at 5:15 A.M. From then on song was heard from various directions, far and near. The morning was bright and clear. (60° at 7:45 A.M.). About 8 A.M. thrasher song seemed to concentrate about 100(?) yards to the north east and it looked as if a convention were assembling there (and sounded like it)

About 8:45, as song was still in progress, I went over there.
A thrasher was singing loudly from the top of a pine in the McCauley garden. "The" robins were there too, but I saw no other thrashers. The Nichols lawn was also unoccupied by birds of any kind; but Rhody, who had had his first house about 7:30 A.M., was sitting on the roof of the play-house "taking things in". (He had not stayed late in his house this bright morning).

I returned here at 9 A.M. Neo was now singing from the top of the pine south of the tool-house. All was quiet in the McCauley area. Before I could get in to make this entry responses to Neo were coming from the northeast and north. (Thrashers moving in).

9:20 Neo continues to sing from the same pine. A thrasher has joined him there and sits 4 feet below him"encouraging" him with talk and short snatches of song (N2?). A third thrasher sings from the pine at the north fence.

9:25, This thrasher also has an audience of one, and there are two other thrashers nearby. One, in a maple 50 feet from him, sings. One running about in the baccharis, nearer, utters short, musical calls. 5 thrashers accounted for. None on the Nichols lawn.

9:27. Neo dives down from his tree into orchard.

9:35. Fairly quiet. A little song to the north; some scripping. I go to north fence. Nichols lawn vacant, but Rhody, in one of his fits of exhibitionism, is cutting caper up and down the steps leading from the veranda to the lawn, rattlebooing and darting off and through the shrubbery, with no visible audience except perhaps me, 100 feet away. He subsides and begins to explore.

9:40. Quail beging to explode from the north pines as I approach and thrashers sail out by ones and twos,scripping and dropping down into the baccharis covered slope. This seems to end the gathering, for the time being at least.

9:50. As I wrote the above, thrasher song begins again somewhere in the garden. Based on past observations, this should be Neo, remaining steadfast in his territory. I shall go out to check up.

9:54. It was Neo in the pine south of the tool-house, singing loudly. N2(?) was sitting 2 feet from him, scripping. I managed to divert his attention from his song (he was 30 feet up in the tree) by tossing leaves,and pinches of bran from the worm-box. One good look at me and realization came; he dropped down to the driveway, ran quickly back to me and got his worms. (The angle of descent would have been too steep for him to have landed nearer. N2 also sailed down almost simultaneously, but not to me. A few worms and Neo ran off to the feeding station at the oval lawn. I go out to see what can "be done about it", thinking N2 probably also there.

10:10. At 10:01 Neo comes promptly for more worms, talking to an invisible mate. Soon I see her too. The worms are too strong a temptation and she comes out too. I now have both Neo and N2, for the first time in several months, taking tossed worms freely in the open, and without retreating after each worm but waiting for me to throw more, until my supply is exhausted. While waiting they make short jabs at the lawn and continue to talk.

I now went down to Mr. Sampson's. Three thrashers there (unidentified by me) and a russet-backed thrush. (Getting late for them?).

Thrashers everywhere. On returning about 11 o'clock, found this place full of song.

1 P.M. Much song ever since. For the last three quarters of an hour Neo has been singing from the pine south of the tool-house Another in the sparrow-hawk pine. Another in the pine nearest the north wall of thehouse. This bird is such an accomplished and varied singer that I had to see him actually before making sure that he is a thrasher. He has an imperfect,though convincing rendition of the

full song of the russet-backed thrush; all of its varied calls, including danger and scolding and a varied assortment of phrases strongly suggestive of other wild birds. He and Neo are about 75 feet apart and in view of each other. Neo is fairly excelling himself and I think is catching russet-backed timbre, if not its full phrases, from the other bird.

Full song gradually faded away and, at 2 P.M., Neo was found sitting concealed in the depths of the honeysuckle in his innermost retreat singing softly to himself. (76°).

Rhody's moult. Rhody, meanwhile, not wanting a mouse, had helped himself to meat in the cage. His crest has large gaps in it due to the moult.

Rhody in house at 4:15. 4:15 P.M. Rhody has just gone up into his house No.2. It remains to be seen whether he has gone there for the night. It is bright, calm, 72°. There is nothing in the weather to cause him to retire early. He has had one mouse and two pieces of meat today. What he has caught himself I do not know.

Thrashers about all day so far: principally Neo and mate; no more conventions.

5:20 P.M. Well, at 4:49 Rhody was not in house No.2. After search about the grounds I went to house No.1. There he was!?!.! This offers innumerable opportunities for speculation: but I will merely note certain physical facts here:

1. The sun shines in both houses at this time of day and year.
2. It shines into No.1 until sunset, at all times of the year.
3. At this season it will be out of No.2 much earlier than for No. 1. on account of trees to the west. Later, at about the end of this month, the sun will shine in both until sunset and continue to do so until about the Vernal Equinox, when No.1 only will "see the sunset" (and consequently Rhody).
4. The west-facing bank where No. 1 is retains the heat of the sun longer after sunset and, when there is no wind, the air is warmer later in the night, than at No.2.

September 5th.

Thrasher song first heard at 5:40 A.M. From then on it continued practically without interruption until after 9 o'clock. The morning was bright and fair.

From the beginning song was right at home, with others from the distance. At 8 o'clock it was coming from all direction, two or three birds being singing here. At little later the principal song was coming from the pine south of the tool-house. At 9, reasonably certain it was Neo, I went out: singing continued for a few minutes, ceased, then he dropped down to me for worms, N2 following, butnot all the way to me. This terminated loud song here and curiously, none could be heard from afar, but there was local "talk" in which could be heard the pit-yur-kit, pit-yoorky phrases used by Brownie. Shortly all thrasher sounds ceased. (Est. temp. 68°).

Rhody was found sitting in the almond tree from near which the talk came. He brightened up on seeing me, came down and beat me to the tool house, greeting me with a rattleboo on my arrival (or perhaps is was censure for being so slow). He picked up the large mouse offered, but dropped it and allowed it to run away and stood quietly waiting for me to hand out a smaller one, which I did. He ate it promptly and then retired to the lath screen to rest and, later, preen.

At 10:30 (actual temp. in court 72°) no thrasher sounds whatever, but in five or ten minutes song of several birds revived, all coming from the direction of the Robinsons' (East).

A few minutes later, song was approaching and soon two thrashers were singing in the east end oaks of this place and others were somewhere nearby. Out of the confusion Neo was identified followed by his faithful satellite. From now on until after 4 P.M. he could be located at almost any time, either by full song of long duration from the pine he favors at present, from his inner sanctum, or by sub-song from the latter place. In the pine he was usually accompanied (in a dual sense) by his mate, who seemed to develop a phrase or two like some of his. After 4:15 there was no song up till now (5:40) at least.

ck in Rhody remained home all day, as far as known. Two mice; two pieces of meat. At 5:15 he was in his No.2 house in the eucalyptus tree. I will see if he has changed his mind again as he did last night. 5:47. Well, he hasn't; he is still in No.2. (Temp. 73°). Yesterday and today were as alike as two peas can possibly be as to weather(and everything else, for that matter, even as to both being holidays!)

7 P.M. Rhody is still in No.2.

September 6th. (Sunrise 5:43;sunset 6:33).

Thrasher song was first heard at 5:25 A.M., close to the west end of the house, where recently it has been originating. It shifted gradually toward the east (to Neo's inner sanctum)

By 7:15 there was no song at this place, but during a 15 minute's tour of the garden, distant song could be heard to the south; a thrasher began to sing at the echo pine; another was seen climbing, silently, the pine nearest the kitchen and a fourth was discovered on the Nichols's back lawn foraging with about two dozen robins.

(Rhody was up before 7 A.M. and after a brief sunning at the sage-patch, disappeared). (62°).

About 8:45 there were signs of the thrashers gathering in the vicinity of the cage, but with almost no full song, such as is the usual preliminary. Three or four thrashers were now seen foraging in and near the Nichols lawn. There was some talk and posturing. Soon another thrasher appeared on the wall and looked down upon the others. He began to scrip and kept this up for 10 or 15 minutes. Another came from the west, climbed a pine and also began to scrip. There was no song at all. Three or four thrashers were now under the oaks bodering the east side of the lawn, moving about with raised bills and walking stiff-leggedly about each other. One of them began to play hide-and-seek about a bush with no playmate visible to me. The two scripping thrashers joined the others and became silent They gradually dispersed and, by 9 o'clock, three birds were in full song: One in the acacia at the east end of the cage; one in an oak at the Nichols house: one in the very top of a tall pine about 50 yards east. This three cornered song lasted about 20 minutes. The bird in the acacia uttered robin, king-bird and grosbeak phrases.

This bird came further into the garden and stopped singing; the one in the pine made a long gliding flight to the sage patch, as if to see what had become of the other. Full song shortly came from Neo' special pine. Song now sounded from the south, a hundred or two yards away. The bird in the pine (Thought to be Neo) sailed off to the south west. Three birds could be now heard singing from the south and south west, so I followed up, by car. One was located in a low bush about 200 yards south near a group of small pines (about 10 feet high). Another was in the Scanell deodar: both singing without cessation. A third was still further south near the pson's. I got out and stood 30 feet from the bird in the bush.

It faced toward the bird in the deodar, perhaps a hundred yards away. It moved to one of the pine tops, still facing toward the other. I moved still closer and listened to its unceasing song for about 10 or 15 minutes. It was still singing, as was the other (whom, from his song, I thought to be Neo)-when I left for home. This bird (in the pine) was a quail-russet backed-robin-thrasher. I think it was the earlier kingbird-robin-grosbeak thrasher.

The songs died out shortly after I got home, but after an indefinite period, broke out here in two places and in another a hundred or two yards to the north east. The two birds here were located as follows: One in the top of the old oak: one in the honeysuckle-covered fence near the entrance, about 50 feet from the point usually occupied by Neo when strictly "at home".

These two birds, only, were watched. Their songs were the nearest alike of any two thrashers I have heard (always excepting Brownie and Greenie). I thought I could detect a tendency for each to alter his phraseology slightly to conform nearer to that of the other bird, but may be mistaken. 10 minutes of this and the bird in the old oak tree glided downward to the east just clearing the honeysuckle. The bird there stopped song and popped up out of the thick growth precisely at the point where the other crossed, waited a minute or two and then followed (and so did I). By the time I could get in position to see them, one bird was 150 yards to the N.E. resuming song; the other was following by easy stages in no hurry and was last seen entering the same group of trees from which the other was singing. I followed no further. 11:30. (Temp. 78°).

This series of events, beginning with the return of the two singers here from north and north east about 9:20 A.M., although I can not be absolutely certain of the identification of the participants, most certainly looks like a case of defense of territory on the part of Neo. If that is what it was, then it is the first clear (to me) manifestation that all this convention business is a territorial affair. It should be recorded, however, that even in this chain there was no chasing, no threatening, no combat. It seems to have been a matter of moral suasion.

Events earlier than about 9 o'clock, i.e. before the two scripping thrashers appeared upon the scene where the others were feeding and stalking about, do not seem to have been inspired by any bird issuing a broadcast. During the last few days many other birds have gathered there to find food on the lawn and in the shrubbery, and as noted, one thrasher was there alone with the robins before any gathering took place. At this time of the year when all uncultivated areas are thoroughly desiccated, birds--especially insect eating birds (and rabbits) find their task in securing food much simplified by resort to the gardens in this area. Consequently it may be that the tendency of thrashers to collect at such places is not altogether a territorial affair. Some part of the motivation is hunger, and an element of accidental meeting of strangers--with resultant excitement-- requires consideration.

4:50. Since the above observations were made, almost nothing has been seen or heard of thrashers in this vicinity.

Rhody came home about noon and resorted to his optimum tree. He wanted no mice during the day and ate but two small pieces of meat. Perhaps he filled up on snakes and lizards while away.

At 4:34½ exactly, he entered his house No. 2 in the eucalyptus tree. We shall see if he changes his mind again as he did on the fourth, and finally goes to No. 1. There is plenty of time before dark and he may become bored by waiting in one place for it to come. (Bright, clear, calm, 75°). Two hours of the sun staring him in the face still to come!

5:30 P.M. I must have had a "hunch", for the old reptile is no longer in nest 2. Thinking that he may have decided in favor of a mouse after all, I looked in all the places where he is most likely to be found when mouse minded, and called, but no response.

At 5:40, having an errand down town, I stopped at house No.1. Not there either.

On returning, I stopped at No.1 at 6:15. Still not there.

At 6:20 looked in No.2. There he was. I am certain he was not there when I looked before.

September 7th.

I was awake at 5 A.M., so listened acutely. First thrasher sound (full song) was heard at 5:20 close to the house on the west. Almost immediately full song sounded close by near the east side of the house. The first song ceased and was replaced by scripping, which moved east,(suggesting N2 going to join Neo). Evidently a thrasher sleeps close by to the west.

I dozed intermittently. Thrashers could be heard in various directions whenever I emerged from the borderland. At 7:30 three full songs could be placed: North, S.E. and E., all nearby. The northern song was from a pine 40 feet from the north window of the alcove of my bedroom. The bird sat in full view back toward me. The eastern song seemed to come from the sparrowhawk pine; the south-eastern from Neo's pine.

At 7:45 all was quiet.

At 9, as I went down the front steps, a thrasher at the oval lawn started to bolt, but changed course, returned part way and was given worms. He watched the course of each worm through the air. He now went to the N tree (Neo's pine) and sang loudly, using the victoree phrase frequently. (Curiously, Neo was not heard to use this phrase at all yesterday).

Thrasher song could now be heard from four singers, all of whom I located. Neo in his pine (N2 with him and joining; put ? after N2). One in pines on north line; one in oak over fence north of cage. There were two other thrashers, not singing, but foraging near this last one. 6 thrashers located.

By 9:30 song had died out and all was quiet. While writing the foregoing Neo appeared outside the window, apparently sizing up various pools with an idea of bathing. I went to the door and tossed him worms. At 9:40 I found him drying himself at the oval lawn. He came for more worms, prodded thegrass close by, got a cut-worm, ate suet pudding at the station, "did" a typical thrasher one-sided sun-fit, came for more worms, ran to his pine and began song before he reached his final perch. (He had been"talking" softly thoughout all this action--keeping contact with the invisibile N2?).

In 2 minutes answering song came from the SH pine. I did not go out, as I was writing notes. Song continued until 10:20, (as heard from this room).

10:25 to 10:35. During this interval I stood under the SH tree looking over the wall into the Nichols garden. Overhead: One singer and one "scripper". On lawn, one "sunfitter". Edge of lawn, two thrashers stalking around a bush with bills in air, one of them singing a soft "jingling, tinkling, fluting" song as they confront each other at two feet distance. The "scripper" comes down from the tree and runs back and forth along the fence looking down at them. He joins the two, watches, taking no part, returns to perch [illegible] the wall. Meanwhile the "sunfitter" has crossed the lawn to the [illegible] and is playing [illegible]

[illegible]

erformance--of which I am the only known spectator at the time--b ulling offa circus like Rhody's, figures of eight and all, direct

away from the other birds. This he keeps up for a minute or two. Meanwhile the singer, who has been silent for some minutes, comes down, looks, disappears. The scripper is still on the wall. I make worm-tossing gestures. It approaches, takes worms dropped over the wall. Identity? I come in to write this note. (76°, slightly hazy these last 5 minutes). Hear some song from here; 10:45.

Rhody has not been seen as yet today, and has not eaten his meat.

He seems to be losing his interest in the stuffed owl. Hope he has not decided that horned owls are harmless.

Going back to the thrashers, 11:15, at 10:55 I went out to my northeast corner. This area is completely covered with oaks. Full song came from the Robinsons', due east. Full song broke out directly overhead from an unspotted bird. A fluff-fluff of wings behind me and a third thrasher landed in a drooping oak branch at shoulder height, 8 feet back of me. Frightened at its own temerity, it glided off to forage beneath the trees 50 feet away. Song from the east ceased. The bird overhead also stopped and sailed down to Neo's sanctuary and resumed full song. Two birds struck up from the north. Impossible to trace them all! I came in to record this much anyway.

It will be observed that, in these affairs, the number engaged usually (or most often) works out at five, suggesting two parents and three birds of the year. But as two of the adults are most certainly Neo and N2 and they are thought to have reared successfully but one chick and are definitely known to have reared not more than two, the parties, even when composed of not more than five individuals, can not be exclusively affairs of one family.

In the event described when the scripper, the singer, the two "dancers" and the one"sun-fitter" were the performers, it is clear that two birds were merely watchers: presumably the adults Neo and N2. One was a solitary comedian, speculatively fitting the supposition that, since there was an odd number of birds present and the two dancers were more interested in each other than in him, he was frozen out and had to find an outlet for his exuberance of spirit by inventing an imaginary partner. The other two (dancers) may be considered as unmated birds also, probably birds of the year, seeking to form an alliance for the future.

This is, of course, purest speculation and might be carried forward indefinitely as, for example: The three performers would become birds of the year: one of them the(probably)sole surviving offspring of Neo and N2 would have to be (in order to avoid possible future incest(!) one of the two dancers seeking a mate from another family. The solo actor, especially since he has now on two succeeding days selected the same lawn about which to cavort, could be a nestmate of the dancer unrelated to Neo and mate, etc, etc......

11:55 Full song still coming from Neo's sanctuary. N2(?) in bushes nearby. "Too many thrashers". (J).

Rhody has visited the cage for meat, unseen. J finds him--very thirsty. Noon: he climbs his optimum tree and settles to rest. Neo continues to sing his head off.

Neo, after about 15 minutes, moved up to his pine and the oval lawn vicinity, singing almost without pause until 1:05. This had attracted a thrasher who sang from a pine on the opposite side of the house for a half hour. Neo then went up in leisurely fashion accompanied by his mate, foraging en route, apparently to"see about" it. No hostility was evident. I could not follow the ensuing events, but song ceased from all quarters. However, by 1:14 (which is this moment) Neo and mate appeared to be talking just outside this window on [illegible].

1:23 P.M. Just returned from the court where I hav [illegible] "entertaining" Neo. I saw another thrasher in one of the [illegible] on going out. It was singing a sort of sub-song. I offer it [illegible] without result, but the sound of wings close by my ears attracte my attention to Neo, who had seen what was going on and had glided down from somewhere to participate. He was well supplied with worms and now there is a confusion of low thrasher songs [illegible] warbles in the court outs[illegible].

1:27. This developed into renewed full song by Neo from hi pine, another bird (N2 being with him) and the third bird renews so from the other side of the house. We are as we were before: a clear case of status quo ante. If Neo is defending his territory, he certainly is not vicious about it. His behavior is in striking contrast to what it was when he was seeking to gain it and fought so [illegible]ntly as to ruin his plumage for months. (Perhaps he do[illegible] [illegible] to muss up his fine, new suit of clothes. On the otherhand, [illegible] in possession of this territory and a mate the psychology of [illegible]tuation is now with him instead of being against him, as [illegible] then).

(California Jay and English Sparrow).

(During the lunch hour the sudden shrieking of a bird i distress came from an oak in the court, in the midst of Neo's song. I found a jay had clutched an english sparrow and was "massacree-in it 20 feet up in the tree. Yelling at it and clapping my hands did no good, so I got a BB gun and shot the sparrow dead right out of the jay's clutches. I am not saying which one I aimed at. [illegible] ay screamed and flew off, but was back again shortly searc [illegible] canopy of the tree for the sparrow. Wondering what it would [illegible] if I showed it the sparrow, I dropped the latter 10 feet in front [illegible] me. The jay came down, picked it up and flew off with it. The sparro was full grown, but I think a bird of the year).

1:50 Thrasher song in court still continues, but of the low, confused type of that stage of the convention period when [illegible] bird are close together . Now it changes to full song from the N ine--now it ceases altogether. No use trying to keep up to the exact [illegible]te. Full again.

[illegible] east of the cage. He followed promptl to the tool-house, booing at me through the door. Gave him one. Incidentally the mice are doing well by Rhody. In the last couple of weeks they have had 90 babies.

Up to 3:20, when I left for a short absence, Neo sang often, mostly from his sanctuary. He had stopped on my return at 4:30, but as I was watching Rhody entering his house 2 at 4:47, Neo came throug [illegible] by Rhody's tree and was given worms. In a few minutes he was again in full song. He is making a record for himself today.

At 6 P.M. Rhody was still in his house in the eucalyptus tree and apparently meant to stick. He had spent most of the afternoon in his "optimum" tree and had had a second small mouse about 4:15.

September 8th

Thrashers sang at 5:30 A.M., perhaps earlier when I was still asleep. Thereafter song was scattered and not very enthusiastic until about 8:50. At that time one thrasher was singing from a tall pine 50 feet or so from my N.E. corner. There was nothing: not even rabbits and robins on the Nichols lawn. Shortly a solitary thrasher came out of the brush to the west and began to dig on the edge ofthe lawn. Two more appeared under the oaks on the slope

forming the east boundary of the lawn. All three foraged industriously, at times ceasing this activity to pose and talk. There was some chasing (without anybody being caught and no chase being pushed to a conclusion) much as members of Brownie's broods when with me in the glade chased each other and used me as a station in their play. (One bird would use the top of my head as a place to be defended from the others). There was more or less running back and forth across the lawn with a tendency for 4 thrashers (I do not know where the 4th came from) to work toward the N.W. in a loose group.

Meanwhile the sole singer in the pine to the east came down to scrip and foraging without actually joining the others. 5 thrashers now in plain sight. The newcomer, on invitation, came along the top of the wall and got worms from me. He then climbed the acacia east of the cage, sailed down toward Neo's sanctuary and was immediately followed by a sixth thrasher, running along the ground.

Six thrashers were now accounted for. The other four wandered off, loosely grouped, into the brush on the slope north of my north fence, apparently in amicable relationship. By 9:30 nothing could be seen or heard of them.

The other two seem to have continued on to the south west, where loud song soon developed in what is regarded as neutral territory between the domains of Brokenwing (at the Sampsons') and Neo here.

A"listening and looking" survey of ten minutes duration about the grounds beginning at 10:20 failed to reveal the presence of one thrasher, near or far.

It may be significant that, with four instead of three, thrashers on the ground together, there was not seen this morning the solitary hide-and-seek game of the odd bird of yesterday.

Rhody still moulting. I picked up a freshly moulted central rectrix of Rhody this morning. Except for slight fraying of the white spot at the tip, it was smooth, glossy and unworn.

Rhody's mice presented him with still another batch of youngsters during the night!

He has not been seen this morning. (10:35, temp. 69°).

10:45. Neo and mate home again. The former in the court singing short songs at long intervals; the latter at the oval lawn. There are no outsiders to be seen or heard, in contrast to yesterday.

I now left for town. Returning at noon, I found the place ringing with thrasher song: one bird in the N-pine; one near the entrance; another to the north some distance away. The two first mentioned sang almost constantly, full power, and it was noted that their songs were much alike. Evidently the same two birds previously observed to have songs almost the same--a rare phenomenon here. This kept up for about three quarters of an hour, then song ceased.

About 2 P.M. Neo began song from his inner sanctum, then shifted to the oval lawn to feed. As he was going to the N-pine I caused him to change his mind by offering worms. After eating he sat in a bush ten feet from me and sang for 20 minutes. I listened to every nuance. This song was like none heard from him before. It varied from the tree-toad motif to the high peer, peer, peer heard only once before at this place and that was years ago.

The California thrasher constantly varies its song; new musical phrases and "words" are constantly added and old ones dropped: sometimes never to be heard again from the same individual and rarely from any other.

From 2 o'clock until about 4 Neo seemed to occupy his territory alone and he was not heard to talk to a mate when near me.

He had an easy afternoon and was much at leisure.

Rhody was found in his arm-chair roost in the cage about 3 P.M., taking it very easy. As I talked to him, his eyes gradually closed and he dozed; but when I walked away, he came to life and followed to the tool-house for his mouse. Some of these creatures are now too big for his ordinary appetite. The intermediate sizes have all gone down his gullet; so I had to give him a very small one. This seemed to satisfy him for the time being, but in about an hour he came for another.

He went to his No.2 house for the night at 4:52.

September 9th

Thrasher song first heard at 5:20 A.M., to the west. There after, scattered song in the distance, gradually concentrating in this neighborhood about 8:45. I was otherwise engaged to keep in touch with affairs, but sounds of a convention came from the direction of the cage. Later Julio had supplied Neo with worms near the cage and Neo had gone up the SH pine and started song. There was response from two other singers close by. This was about 11. Just before 12 I went out to the SH tree. All was quiet. Two thrashers were digging single mindedly under the oaks bounding the east side of the Nichols lawn. There was no posturing of an kind and they paid no attention to my offers of worms. (84). This temperature does not seem to have had any effect on song or tendency to gather, contrary to an earler indication this season that it might. Howeecer, as stated, I have made no close observations today as yet.

Rhody again kept out of sight during the forenoon; but at 1 o'clock, I found him wiping his bill near the cage after having eaten a piece of meat. He now proceeded to "kill" a twig and I left him. When I got almost here I found he had followed, so I turned back toward the tool-house preceded by him weaving from side to side of the path so that he could keep on going and still look back to see if I was following (or to keep from being stepped on). He gobbled the tiny mouse at once and left.

Neo is becoming a great entertainer.

Neo's digging song. Differs from Brownie's.

2:15 (Temp. 88°). About 1:15 light converstaional song could be heard from the vicinity of Neo's pine. I went out and sat in the shade by it, called. Soon Neo's head peered up over the bank. The song continued. He now began to dig and sing at the same time. I have several times wondered if he was a "dig-singer" like other thrashers I have known intimately and was now to find out. For the next half hour he alternated between "sing-digging" and coming to me for worms still keeping up the song. He was full of confidence For a time it seemed that he had "just another" thrasher digging song: fine and varied, but without unusual characteristics. This was soon changed when he introduced full song with his digging and, until digging ceased, full song was freely used with it. It was observed that he used the more staccato phrases and seemed to be talking to his job. A highly interesting performance. As I recall it, Brownie never sang loudly when digging.

In addition to this departure from accepted standards he snag full song while facing me on the ground 6 to 10 feet away awaiting worms. Several times this lasted more than one minute. He did not approach Brownie's record of singing three-quarter song to me 10(?) feet away for three-quarters (?) of an hour. (Ref. back notes).

No other bird was with him. At 1:50 he decided to climb his pine tree and renew song from there. 5 minutes of this brought his mate(?) running from the north east along the road. She climbed up at once. No greeting sounds were heard as song momentarily ceased. Character of song now changed (after 5 minutes or so) becoming softer as if (as it no doubt was) intended for the mate. A few minutes more and Neo shifted across the low roof of the house to a tree close to the north wall. His mate now began to scrip from her place in the pine. Soft song now came from Neo's direction. N2 went there via the tree tops and the roof, scripping en route, but stopping on arrival. I came in to write this note..
(Incidentally this episode bears upon the matter of thrasher song when it is fairly warm: referred to in first paragraph of this date).

2:40. The light sea breeze which usually arises about this time and keeps temperatures from rising too high has arrived (86°).
By 3 o'clock Neo had resumed song, this time from his inner sanctuary. He kept it up there until about 4:10: almost constant song. He then shifted to the acacia at the east end of the cage and resumes, using now an entirely different set of musical and verbal phrases. Among them was that exceedingly rapid succession of syllables with striking rhythm introduced between phrases differing completely in time and timbre. The nearest I can approximate it is:

Teh taah teh teh, taah teh teh, taah teh teh taah

This was uttered in almost a monotone; the underscord syllables strongly accented; time: faster than I can make the sounds.
At 4:20 he sailed down into the Nichols place and began to dog. He was all alone. (79°) Cloud over sun.

Rhody, after his one o'clock mouse, retired to an acacia near the end of the row in which his optimum tree is located. Presumably this latter tree no longer furnishes optimum distribution of light and shade under temperatures such as ruled today.
At 4:20 he was still in the same place in the same tree, but beginning to beinterested in events of the outside world.
At 4:45 he came down for his mouse and headed for house No.2.

September 10th. (Sunrise 5:47; sunset 6:27).

First thrasher song was heard at 5:40, although there may have been earlier.
1:10 P.M. There has, I believe, been no time that the thrashers have been silent since first heard. I have seen no full-sized conventions as yet, but there have been gatherings of three or more singers several times at this place and song by Neo has been the usual thing today.
When three thrashers were singing here, about 8 A.M., one of them in Neo's pine, imitated the call of the plain titmouse frequently and so successfully that I had to make a special effort to determine that it was the thrasher and not that bird. The particular call went:

Tsk cadét, cadét .....cadét.....

After this phrase the bird often said: Perfect, perfect......
A little later he had a run on Pickwicks

Rhody had one of the tiny mice about 8 o'clock. About 12:50 when I went out to size up the convention, then in the sparrow hawk pine area. Rhodyspotted me and came running fast without being called. He wanted two of the small mice.(80°).

After this he remembered the owl and went into the shop to look at it in the office next door. I took it down from the table and showed it to him. He stood his ground with raised crest, rattle-booed once, then jumped up to the bench to watch a butterfly that was fluttering on the inside of the window glass. Tiring of this, he looked at "everything" in the shop from his position on the bench curiously. There is no doubt in my mind of his taking cognizance of objects unfamiliar to him even when they are not in motion . In about 5 minutes he turned and went out the door to look about the court.

He spent much of the afternoon in his new acacia roost. On returning from an absence at 4:15 I found Rhody in the cage trying to get at the magpies with more than his accustomed earnestness, climbing up the wire, rattlebooing and making sounds like tearing heavy cloth (rapid bill-rattling). about 4:30 he came out and had another of the small mice. For some reason he was suspicious of some thing toward the north and kept a lookout in that direction while on his way to roost. He continued this scrutiny at his first station from the ground for several minutes, then suddenly went through the other four (of which the last is the threshold of his house 2) in less than 3 seconds and plunked instantly into his bunk with tail spread against the wall; time, 4:57, temperature 69°.

Neo was also present at 4:15, still singing.

September 11th. (Sunrise 5:47; sunset 6:26).

Thrashers singing in the fog.

At 5:20 A.M. I was aroused from the "in between" state by the song of a thrasher, so loud that it seemed to be right in the room. A dense fog, which obscuredall objects to the west beyond 200 yards, lay like a blanket below. This thrasher, instead of making his way east into the garden, as has been customary, plunged down into the fog blanket and his song there, with two others, continued as I dozed off again.

By 8 o'clock the sun was fully out and song could he heard from distant points, but not here.

At 9 everything was quiet.

Rhody disgorges a pellet.

Yesterday afternoon I watched Rhody for a short time trying to disgorge a pellet unsuccessfully. This morning I found he had obligingly (as if to insure the competency of these records) left a fresh one on a flag-stone just outside this window. No other bird here casts pellets of black mouse hair. He had not been seen in the court this morning, but had been given a mouse by J at 8 o'clock.

11:10 A.M. Absolutely quiet as far as thrashers are concerned, at present; but preceded by a song period just ended.

At about 9:50 song of a thrasher could be heard over at the Robinsons' (east). I stationed myself near the sage patch. Song (apparently of one bird only) ceased in a few minutes. Soon it was renewed behind me from the "chaparral" of the south bank--Neo's special domain. I advanced along the fence toward it. It shifted to my rear. This sort of thing was repeated several times. Finally I stood still and Neo came through his passageway in the fence and took worms tossed to him. He was all alone, so did no talking. After a good drink he climbed up his favored pine (Tree N) and began to sing loudly as I stood close by. He was answered almost immediately by an unseen thrasher in the shrubbery surrounding the

oval lawn. Interchange of full songs followed for about 20 minutes, the song of the second birdbeing much like that of Neo, but inferior I suspected this bird to be N2 and waited. (For it to join Neo). Shortly it appeared in the path on the way to Neo's tree. I made worm-tossing gestures and it ran back. I filled it up with worms. N2, still a bigger bird than Neo, with one or two loose feathers. She went to join Neo. Singing stopped for a moment, then was resumed ceased abruptly. There was no h-a-i-h greeting such as Brownie and Greenie used. At 11:05 one bird could be seen working its way toward the glade and both disappeared, absolute thrasher-silence reigned.

11:25. First subsequent thrasher sound (11:25) as I wrote the foregoing: scripping outside in the garden somewhere near. (N2 is the more frequent scripper of the two birds). Song renewed shortly from Tree N. Soon an answer from the other side of the house. In 15 minutes or so Neo came down from the pine and went over to investigate. I was now occupied with a visitor and did not follow up. Scattering song was heard from different places in the garden up to about 2 P.M.

4:36. No gathering of thrashers here today of convention proportions; the most to be accounted for in the garden at one time was three.

About 3 o'clock Rhody was heard "tearing cloth" for the benefit of the magpies. He desisted when he saw me walking toward the tool-house, followed and was given a small mouse.

Rhody retires (?) early.

A little after 4 P.M. he was again at the magpie cage and again came for his mouse. As these mice are very small, I offered him another. He was undecided, watched it for several minutes; reached for it several times; concluded he had no space left; went off to dust and was in his house No.2 at 4:22. (Calm, sunny, 67°). This is so early that I think it likely that he will come down again.

R changes to house 1.

5:40. I went out to see if Rhody had stayed in No.2. He had not. I tapped the tree with a long pole to make sure I had not overlooked him. No results. I looked about to see if he might be near, mouse-minded. Not present, 5:15. Nothing remained to be done but to go down to his house No.1. He was in the ladder-tree in the next to the last position, staring fixedly in the direction of his next move. He remined thus for 5 minutes, then moved to the last position in the ladder tree. 4½ minutes there, still in the same pose without a glance at me, and he jumped across to the nest tree. A half minute wait, still staring ahead, and he was inside his house and settled, tail up against the wall, at 5: 32.

At this time the sun was still shining directly into both houses.

Modification of earlier analysis of relative warmth of areas surrounding the two houses.

I shall have to modify my comments of the other day as to the relative warmth of the two locations. At house 2, as recorded above, it was calm. At No.1 I found a stiffish breeze from the north, making that area chilly in contrast to the north-protected vicinity of house 2. Which area then is the warmer at bedtime and following depends also upon the direction, force, etc. of wind, if any.

September 12th.

9:55 A.M. At 5:30 A.M. I heard the first thrasher call (or rather first heard) close to the house on the west. Song at various points about the garden has been heard almost constantly since.

The thrasher does valuable work upon the lawns and contributes free song.

At about 7:45 Neo was singing from his pine tree and another thrasher was busily engaged in making divots on the oval lawn in the process of extracting cut-worms. Many marks of her (N2's?) activities were strewn about the dewy surface. Many persons have complined about the work of that"brown bird with the long curved bill". It is true that thrashers raise cain with freshly planted lawns and mar the surface of well established ones. However, these blemishes soon disappear: usually after the next sprinkling on old lawns. In this territory, as has been pointed out in these notes more than once, cut worms cause large brown or even dead patches in lawns during the late summer months. These patches persist for a long time, often necessitating reseeding. The thrasher is after the cut-worms and the slight damage it does is far and away offset by the good it does in preventing the occurrence of these unsightly patches. Again,in performing this service, it is far neater than the average paid gardener would be and,further, saves the amateur much back-breaking effort(if he is conscientious about his lawn). Furthermore the thrasher pays for the privilege of working on our lawns by unlimited song during the very season (also before and after) when he is doing this pest control.

Neo shows human reactions in bathing.

At about 8 A.M. Neo, not knowing he had a spectator, was investigating the small lily pool in the court to devise ways and means of securing a bath. He was very human about it. This pool is roughly circular, about 4 feet in diameter; shallow as pools go, but deep for bird bathing, even for the thrasher who likes rather deep water. There is a succession of tiny pools leading from the hummingbird fountain to this pool. Neo found each ofthem too small. He now skirted the margin of the larger pool considering whether he should go down the bank into it , testing the water with his bill. This method did not appeal to him and he next considered flying out into the middle and landing on the lily pads. He tried this two or three times, but lacked courage to make the landing and kept on to the other side. Next he landed in the middle of the leaves, but got out quickly when his feet got wet. Finally he stuck to it and found a place where the thick central "trunk" of the plant comes near the surface and radiates stems in all directions. A few tests of the water with the tip of his bill, and bathing was in full swing.

An example of territorial rivalry?

He now went to his pine to dry and sing. Thence to the old oak to sing some more, still twiching his wings after the bath. This song brought a rival from the north to sing in the pine near the cage. (I am wondering whether this bird is the "Inver" with whom Neo fought last year). After a long song Neo went to the SE pine. The other song had ceased. I stood under the pine and looked over the wall. Two thrashers were working on the lawn. Neo continued to sing from the pine for several minutes longer. He then dropped to the edge of the lawn. One of the two others ran to him at once from 50 feet away. They confronted each other with raised bills,talking and gurgling, advancing, retreating and sidling about. The other(3rd thrasher came to look, then went back to work. No.2 went off 10 feet north and began to dig. Neo went into the enclosure about the playhouse. Suddenly he rushed through the fence at the other bird and retreated, the other not following. There had been the sound of clashing wings. Both foraged for a time. Again they confronted each other, then separated. Neo now attacked and, for a few seconds the birds fought face to face on the ground and in the air, then both resumed digging.

I now made worm-throwing gestures and Neo ran to me quickly for worms, eating peacefully. His late opponent now ran to us, looke at us for a moment then went off to dig.

This looks like a territorial clash--on the borderline between more or less established and undisputed territories--but not a very serious one. This temporary abandonment of feuds and other

preoccupations of the moment, when food is offered, is an old story at this place.

Neo now returned to his pine to sing and I came out from unde it finding Rhody waiting there patiently. (10:30). He had had a tiny mouse at 8 A.M. and, during all the forgoing episodes had been preening calmly on top of one of his favored lath screens. We now went to the tool-house, Rhody again getting there first. I gave him another small one and went into the shop to wash my hand. I found Rhody, having polished off his mouse, was now in the door looking in. I thought it was the owl that had attracted him, but, as he did not come in, decided that he wanted still another mouse. And that was the correct answer.

Rhody's judgment of his own capacity when offered a mouse too large for his vacant space, has been commented upon here often. Here we have an example of the converse: when the mouse is too small.

Singing continued off and on up until about noon. There was then a fairly silent period for about an hour (perhaps less). About 1 o'clock I went down to listen to Neo, now singing from his nest area. While there a rival began to sing from the north pines. These song continued until 1:20 when they both stopped at the same time , as if turned off by the switch. A quiet period of ten minutes followed. North-bird could not be found. Neo was walking along the fence towards Rhody's No. 2 house-tree. Neo now had to sing again. No response from a rival. He cam down on his own initiative to get worms from me, sunfitting in between worms. (76°). He began to talk to a mate(?) unseen; headed for his pine (Tree N) and resumed song. 1:50, still at it. I listened carefully during each of these three singing periods. During the first one he seemed to try to make all the different sounds he could think of. It became comical. In the second one he dropped some of the earlier phrases and introduced some not caught by me in the first. This song was much less varied. In the third, now in full swing, (1:55) he sounds like an entirely different bird. I can not catch any of his earlier phrases, but, of course, perhaps 90% of them can not be remembered at all. It is the striking ones I have to depend on.

1:58, Silence. I go and find him making "passes" at the surface of the oval lawn. He runs toward me as I makegestures, then watches the worms as they descend toward from the high place where I stand. He seems to be alone and works toward his pine, deflecting for a moment into the rhododendrons on this side of the road, then going to the pine to dig and sing digging song beneath the shrubbery. N2 (I thought she m~~e~~ust be somewhere not far away, judging by Neo's talk, runs out from near the place where Neo looked and crosses the road, disappearing over the rim of the bank. Neo resumes sing-diggin but comes out occasionally to get worms from me, still singing his little song. Finally he works toward the glade and, at 2:16, his full song is heard from that direction.

I had to leave for the afternoon.

Rhody again slept in his old house, No.1.

September 13th.

Nesting reaction of Neo (I forgot to record yesterday that once, while moving about under the pine near me, he ran to a small heap of pine needles, selected one, ran off with it quickly, but in passing a drinking place, dropped it, drank and forgot all about it.

I did not hear the thrashers until 5:45 A.M., when they were already in the garden. Scattered song continued several hours and,

as I was leaving at 9:30 A.M., Neo started the ball rolling by opening up at the SH pine; responses were coming as I drove away.

On returning at 1 P.M., Julio stated that there were many thrashers and much song, "four or five birds", during my absence. Neo was singing from the SH pine when I got back. I could hear him long before I reached this place and a couple of hundred yards from here, I had seen a thrasher flying in this direction. When Neo stopped singing talk followed in the adjoining pine.

About 9 A.M. Rhody had followed me to get his mouse: a very small one. Instead of going away he stood by quietly and was given the mouse he was waiting for and it quickly followed the first.

About 3 P.M. he came for another small mouse. This disposed of, he waited until I gave him another.

R's roosting time, 4:20 P.M.

At 4:20 he went up to his house No.2 in the eucalyptus tree. It seemed probable that he might again repeat his earlier action under similar conditions and go finally to No. 1; so I made several visits to No.2 to see if he had left. However, he remained there.

September 14th.

Opending thrasher song heard to the west, close to the house, at 5:25 A.M. Thereafter, during most of the forenoon, there was a confusion of song, mostly to the west and south, Neo occasionally returning here to sing from his favored posts. As a rule the songs when the birds seemed to be intent upon each other were not full throated and were not of the highest excellence. I did not go down to locate them.

Rhody did the usual things and, in addition, showed a streak of laziness(?) when being given mice. Thus, he was not satisfied with one small mouse and waited for me to give him a second, but when that one proved very active and ran away, Rhody watched it run off indifferently, making no effort to catch it or to find it--although he saw where it had hidden itself-- but waited for me to get him another. This I did.

On returning from an absence, I found him, at 4:30 P.M., already in his house 2 and he remained there.

September 15th.

Yesterday's notes could almost be used for today. Thrasher song came from the west of the house at 5:30 A.M. and, again, was confined mostly to the west and south, this time, however, well into the afternoon, Neo returning at times to sing from his sanctum, dig in the garden, come to me for worms. Most of the time he appeared to be alone.

Rhody again allowed the second mouse to escape and, instead of trying to catch it, wiated for me to give him another.

He entered his house 2 at 4:15 P.M. but at 5 (67°) had left for No. 1.

September 16th. (Sunrise 5:51; sunset 6:18).

11:15 A.M. The day opened heavily clouded with threat of rain--sun just now breaking through.

I was awake long before I heard the first thrasher song: close by to the west--at 5:30 A.M. and fairly dark. Song shifted to the garden for about 3 hours, then to the west lot where it again

became diffuse and more of the conversational type. Three birds could be distinguished.

About 10:30 Neo began to sing full song from his sanctuary, frequently introducing the victoree phrase which he has been neglecting lately, and a see-cret (with the s lisped or even omitted at times--a phrase often used by him before, but, I think, not recorded here earlier). When he shifted to the old oak he was joined by N2, who thereafter followed him when he shifted from place to place, usually beginning to scrip as he flew off.

(It has been characteristic of thrashers here that, when a bird calls its mate, the caller ~~usually~~ often leaves as soon as she arrives).

Neo had occasionally glanced down at me, sitting 50 feet away, and suddenly, without invitation, glided down to me, accepted worms, then climbed the SH pine to sing where he was soon joined by N2. He then shifted to another tree, followed by N2. Here another joined them and, as I came in to write this note, full song had been displaced by the lower, conversational type, everybody talking at once.

When I went out after writing this note, two thrashers were in the pine close to the north wall of the house, moving about, fluting, talking, "jingling" and one of them pecking pettishly at the branch on which it stood. Another was on the north driveway 40 feet away, and another was somewhere in the court scripping. They were all concerned with each other, two being spectators. The affair then seemed to be: two males discussing matters in the pine; two females looking on. It was impossible to keep the identity of the individuals separate, but two now were on the roof marching about and talking and two were in still another pine. I turned away in order to enter the house, go up stairs and get a close look at the two birds on the roof from concealment--but--as I turned, there was waiting for me. (He had been sitting in his optimum tree ever since having eaten a piece of meat earlier). He followed me and, of course, I had to get him a mouse. He now went to peer in at the owl in the office and I went on to carry out my original intention. The thrashers had now left the roof and were at separated points in the garden (including the court).

When I came down and out, there was Rhody waiting for me by the pool in the court. He wanted, and was given, another mouse. When I went into the shop he peered in at me. All of this flattering interest in my movements could only mean that he wanted still another mouse, and so it proved. He now lost all interest in me and moved off. (These are still the tiny mice).

By noontime thrasher sounds had ceased. (78°).

Rhody went to his No.2 at 3:45 (J), but finally went to No.1.

September 17th.

No early thrasher song was heard here at all; but about 8:30 A.M., Neo was stationed in a pine near the Scamell house exchanging songs with another thrasher a hundred yards or so away on the boundary of Brokenwing's territory. Another thrasher (N2?) was in the tree with Neo. During a couple of hours absence thrashers gathered here in the vicinity of the SH pine and there was "much singing". (J).

Rhody ran true to present form. He slept in No.1 without being seen in No.2 at all. He was given three small mice, one after the other, about 3:30 P.M. and "considered" a fourth.

September 18th.

Thrasher song at 5:35 A.M. and song all the morning, but no considerable concentration of birds here. Neo's songs from his pine brought distant responses and one bird came to the pines on the north line, but there was seen no real convention.

Indications at present are that the birds are "hollering" at each other from a distance and not actually invading each other's territories, and it may be that the active part of the convention ~~is~~ period is over.

At 5:45 P.M. Neo was singing loudly from his inner abode.

Rhody stayed home most of the time doing the usual things. He again slept in No.1.

September 19th.

Thrashers song came from the west nearby at 5:30 A.M. and at 8 A.M. was sounding in the garden still. A little later Neo climbed his pine and continued indefinitely, N2 climbing up to join him and putting in a phrase here and there. Thrasher song was often hear during the day coming from the south, but no convention was seen here.

Rhody still moulting.

At about 9 A.M. Rhody was cavorting around a bush in the Nichols garden, as if playing hide-and-seek with an invisible companion, varying this occupation by dashing off through the bushes in spectacular, curvilinear orbits. When I spoke to him he subsided meekly and began to sun his back. A little later he was preening single-mindedly on one of the lath screens, removing quantities of "dandruff" from his feathers and some feathers as well. He is by no means finished with his moult, which has endured now for 5 or 6(?) months.

Rhody and an opossum.

While Rhody preened there was an opossum in a box trap about 8 feet from him, caught during the night on the trap's being set (for cats) for the first time in months. I did not know it was there until I went to speak to Rhody. He could undoubtedly see it, but I moved the trap a little nearer him and tipped it so that he could look down into it. He saw the opossum at once, but after a casual glance at it, went on with his preening. It is possible, of course, that he had seen it much earlier --even probable-- and had already given it all the attention the circumstances required. (The 'possum was taken out into the hills and released; but it probably should have been killed).

Rhody was very much of a home body today, spending much time in the more intimate parts of the garden: in the court and vicinity, and on the low part of the roof. He also discovered another lath screen over a rhododendron near the oval lawn and used this for a prolonged rest. (The sun is too strong for this rhododendron: a Felix Sauvage).

He visited his nest in the glass house in the dormitory tree today and fussed with the twigs there for a few minutes; sat on the windowsill of the tool-house close to the mouse cages and, in general, as indicated above, was more concerned with affairs in and about the court area than usual. At lunch time, when I was sitting in the "cloister" he came to remind me of his existence and need for a mouse This being attended to, he climbed up one of the oaks to see what the jays were doing there, following them through the branches withou sign of hostile intent. When he sailed down they followed him for 50 feet, strangley enough, without a screech. His interest in jays has been increasing lately, it seems to me.

Tonight, he is sleeping in No.2, where I want him.

September 20th(Sunrise 5:55; sunset 6:12).

September has been running true to its reputation as the warmest (by a small margin) month of the year in this region.

I missed the beginning of thrasher song this morning; probably because I had forgotten to open the west windows of my room on going to bed. However, song was heard early on the east side in the garden and was almost continuous until about 8 A.M. (Neo).

At 8 A.M. I went out to look for Rhody, not seeing him until I spotted him on the driveway west of the house, very evidently looking for me. I"saw him first", but as soon as he caught sight of me he came running toward me and I headed toward the tool house, followed by him with occasional pauses to inspect the sole of one of his feet and probe it with his bill. (These notes contain many references to the tenderness of the feet of roadrunners). The route we followed (by scaled map) was 120 yards long. One small mouse was enough, and he retired to one of his favored lath screens to rest and preen. This screen is 4 feet square and is placed horizontally over a small rhododendron near the dormitory tree. A half hour later --Rhody still there--it was seen that the surface of the screen was liberally powdered with fragments of quill-sheaths removed by him in that interval of time.

About 9 A.M. Neo sounded off from his pine and I went out to observe consequences. N2 was at once seen climbing up to him. Almost simultaneously thrasher song sounded from the pine on the north side of the house 150 feet from Neo's singing post. I now, thinking that this bird "ought" also to have a retainer with him, by analogy with Neo and in accordance with a pattern which I have suspected of existing in such affairs, went to watch the other bird. Sure enough: in a minute or two another thrasher was seen at the base of his tree quietly foraging. It climbed the next nearest pine and could be heard, as in the case of N2 and Neo, taking a secondary part in the vocalization. Songs"between"the two groups continued for 25 minutes, then the"Dux"to the north sailed down into the area of the north slop His companion (Comes) sang a fewmore bars, then down to join him. Neo soon ceased song, but resumed for a short period, now from the ironwood tree at the south side of the oval lawn while N2, his mate, or if not actually mated: his companion (follower, comes) ate at the suet pudding station at the oval lawn. Neo was being answered by a thrasher from Brokenwing's territory--probably by that bird himself as Mr. Sampson says he is still there with his mate, and I saw them both there last week. (Incidentally, as I joined Mr, Sampson in his garden on that occasion, the two birds almost immediately showed themselves in a bush about 30 feet from us. This apparition was so nearly coincident in time with my arrival that Mr. Sampson remarked: "Well, here they are. They know you are here!"

On the present occasion I did not go down to the Sampsons' to see if the singer actually was Brokenwing, accompanied also by his mate, but it is not unlikely that both were there.

The bird to the north, whom I have suspected of being Inver (who has not appeared in these notes for some months) next was heard from Inver's territory. He could be identified as being the same bird that was exchanging songs with Neo a few minutes before by a phrase that he had been using while in the pine: something like the "scolding" notes of the russet-backed thrush. (Heard from him before; although this description is not a good one).

It is now easy to fit all of this into a pattern based upon

territoriality--but the following is merely a speculation, since there are too many assumptions in the foregoing data and not enough in the way of rigorously verified facts. However, it looks like this:

Neo and mate at home announcing territory occupied and the two birds mated.

The bird from the north: Inver hypothetically, comes to the No-man's land between his and Neo's territory and even encroaches upon the latter, but does not penetrate far enough toward the inner sanctuary to stimulate Neo into repulsing him. Inver's mate--or if not actually "married", at least a follower, companion, comes, joins him. He is satisfied that the territory is well defended and goes back to the territory which was, at one time, actually that of a bird known as Inver and with whom Neo, in seeking to establish himself in the territory (here) vacated by the death of its former owner, Brownie, fought last year (as described in these notes).

On the departure of this bird Neo stopped singing, but then turned his attention to Brokenwing's announcements from his territory. After singing from the ironwood for a few minutes, his song stopped, and he is believed to have gone down into the broad No-man's land between his and BW's territory--judging only by sounds heard. N2 remained here scripping on his departure (true to form) then was seen to sail down toward that territory.

Dux et Comes. The words Dux and Comes (leader and follower) have been introduced above without explanation; the idea being that these terms are appropriate as applied to two birds that are much in each other's company; where the actually relationship between them (as a mated pair or as parent and young) has not been definitely established and where one of them is very clearly a follower of the movements of the other, plainly playing a role inferior to it , in a restricted sense. In the case of Neo and N2 (or Longtail) Brokenwing and Longbill the relationship is known: they are mated pairs. In the case of the supposed Inver and his comes the exact relationship is unknown, although it is almost certain that they are paired. Perhaps we can designate them temporarily as Dux 1 and Comes 1.

At 11:30 Rhody indicated that he wanted another mouse. I had expected him to show this sooner, as the first one was very small. He was given another small one and seemed satisfied. I now left, returning at 12 o'clock.

Neo was now back in his pine singing loudly. I went there at once. Neo quickly appeared and climbed up to him. Before she reached him I had caught some of his phrases:

Wíck-up, wíck-up............ (Flicker calls).

Pitti-chúrk, pitti-chúrk.......Usually three successively.

Choórie, chereét, cherít

Pít tse-e-e-e-e-e-e-e-e Píck (or pick).

On her arrival the song changed, not only in that the above phrases were dropped, but that all the rest of the song was changed. New phrases detected were now:

Bérry- cawp, bérry-cawp, ... and:

Petree, prilly, prilly, prilly.

At 12:20 he heard Dux 1 singing near the north fence and sailed down, running quickly toward the cage. I followed. He was in the acacia at the east end of the cage singing with still another set of motifs. Dux 1 was in a pine 20 feet on the other side of the fence, 50 feet from Neo also singing. I watched for his comes to come. She did, running along the ground, foraging for a time and then climbed his tree, whereupon his song ceased. Meanwhile sounds from Neo's tree at the cage indicated that N2 had followed him. (She had not scripped when he left her). Her presence was checked. Neo's song ceased and he glided down into the disputed territory (?) of the Nichols garden. Dux 1 sailed down to him at once. The two comes followed. Four thrashers now inside an area of about 4 feet radius. Neo and Dux 1 advanced, confronted each other with raised bills and stiff-legged movements; the other two looked on. This appeared to be a meeting of two males from adjoining territories meeting on common ground (although I suspect that Dux 1 --or Inver(?) wants the Nichols garden for keeps. This is the first time in Convention season that the participants of the two principal performers have been identified with accuracy. (Offhand it looks as if this episode conflicts with speculation made on a previous similar occasion a few days ago-- but it may not.

I now hoped to see something pretty definite; but a fool of a brown towhee, acting upon the dictates of his befuddled intellect, chose this particular time to raise a hue and cry over nothing, at least a hundred feet away. The result, to my astonishment: All four thrashers instantly dashed to cover in different directions. Ordinarily I think they would have resisted the impulse to flee, but they were probably in a state of nervous tension ready to explode on slight provocation. This ended the session. (Note how "convention" appears to be resolving itself into groups of twos).

Rhody, meanwhile, was phlegmatically preening on top of the cage.

At 1:30 he was still there similarly engaged. After a go at the magpies he suddenly appeared in the shop door where I was examining his latest pellet, rattle-booed with impertinent head and tail gestures and led the way to the mousery when he saw me get under way. This time he wanted two of the little ones.

At 2:45 he was still in his second-choice acacia at the north fence, whence he had retired after having his mouse. Here he was resting sleepily; preening forgotten for the time being. (70°).

5 P.M. I was absent from 3 until 4:45. At the latter hour Rhody was on the way to the west lot apparently on his way to house 2. However, when I called him, he came back quickly and followed about 50 yards to the pojnt where he had to decide whether to branch off to the tool-house or go to roost. He chose the latter and his choice was No.2, in the eucalyptus tree. He seemed fearful and gazed for a long time back over his shoulder toward the north east, then hurried without pause from the first station all the way into his house.

Last night, about 11:45, the horned owls were calling back and forth in what seemed the direction of Rhody's house 2, and I wondered how he was taking it. It also occurred to me at the time that, on account of the owls, which were heard here for the first time in several weeks, he would not sleep in No.2 tonight, but in No. 1. and it is still not too late for him to leave No.2 and up to the time I called him back, No.1 was probably his destination.

5:27. Well, somebody please disentangle this:

At 5:14 I found Rhody had left No.2, so proceeded toward the

west lot to get conclusive evidence of his having gone to No.1 after all. I found him sunning his back in the "Clearing" (see map) about 90 yards from No.2, preparatory to going over the fence to No.1 I squatted down 15 feet from him and talked to him. He came back toward me. I then proceeded up the abandoned "lower road"of these notes, followed somewhat hesitatingly by him. He was inclined to keep in the cover. I thought perhaps he wanted a mouse after all, so got him one, but he would not come back all the way and peered at me from the bushes on the bank near No.2. At 5:24 he was back in house No.2, an entirely unprecedented performance.

Now what part did I have in inducing these two returns to No. 2? (Perhaps I am his Dux and he my Comes!). His cerebral "vortex" seems to have been a whirl of me, mice, No.2 --somewhat in disfavor, No.1--really favored for tonight and some source of anticipated danger--perhaps based on recollection of horned owls' presence last night. It also looked as if he derived some courage from my presence. It now remains to be seen whether he will stick in No.2 after all. (Clear, calm, 64°).

6:12. Well, that was not all of it! I found him still in No.2 at 5:50. When I spoke to him he stood up and sailed down, landing almost at my feet. He wanted no mice, but started toward the west. When he came opposite to the side gate he took his old route to No.1, which he had abandoned some months ago in favor of the "inside passage". At 6:04 he jumped across the gap from the ladder tree and took 2 minutes more to make the last 2 feet to his house. He was in no hurry as he had been on his two entries of No.2.

These are the bare facts. What they indicate I do not know.

September 21st.and 22nd

On the night of the first of these days Rhody slept in No. 1 again; but on the 22nd., he slept in No.2, going there at 4:20 P.M. and not coming out again.

On these days the thrasher gatherings partook more definitely of pairs occasionally meeting on the borderlines between territories. The affair between Neo and his rival to the north, consisted mostly of exchange of song across the low roof; Neo occupying his pine and being joined by his mate when he began to sing and Dux 1 similarly attracting his mate. About 9:30 A.M. on the 22nd all four of these birds seemed to be in and about an oak which is almost against the west window of the living room.

Neo again went down into the border territory between this place and Brokenwing's domain, where they exchanged songs.

Neo and N2 were seen foraging quietly at home more often than has been the case lately, and have accepted worms, Neo clearly being the leader.

September 23rd. (Sunrise 5:58; sunset 6:07).

First thrasher song was heard about 6 A.M. Throughout the forenoon there were occasional exchanges of songs between Neo and other thrashers and at least one case of Neo and mate going down into the south No-man's land to exchange songs with Brokenwing.

At noon both of "my birds" were at the oval lawn and came to me for worms, Neo getting all he could whether N2 wanted them or not.

Rhody, who had had a mouse about 8 A.M. stepped out from unde the hedge in front of me and rattlehooed twice for my benefit. He then trotted along behind to get his mouse. I went into the shop to wash my hands, forgetting all about him, but he came to the door

and rattlebooed again for another mouse,which was given him. Yesterday,I forgot to record,once when he came for his mouse,he pleaded for it with his tiny whine(cried). The first time in some weeks.

No further observations until 4:30 P.M. (Dentistry).

At 4:30 Rhody was already in his No.2 house, but he moved later to No. 1.

September 24th.

This day most of the thrasher meetings were off to the south east, east and north east, from 100 to 300 yards away. Neo's song could be distinguished at times from the others. This lasted all of the forenoon. Neo then came home and called from his private domain, evidently (?) to summon his mate, as he appeared to be alone at the time. Eventually the calling produced the desired result.

Rhody again, after a preliminary visit to No.2, slept in No.1

September 25th.

Again the thrasher convention was off in the same territory as yesterday, Neo and N2 coming home early in the afternoon to live peacefully for a time. Neo received worms from me.

Rhody entered house No.2 at 3:45 P.M. and stayed there for the night. (Overcast; max. during day 70°).

September 26th. (Sunrise 6:00; sunset 6:02).

Full thrasher song close to the west at 5:45 A.M., moving eastward in the garden, continuing at intervals for an hour or two.

Rhody had his mouse at about 8 A.M. (Cloudy, 58°).

About 9 A.M. thrashers had been singing for an hour or so in the territory along the north fence. At 9:15 I found Neo foraging near the cage and he came for worms. N2 now appeared. Neo climbed a tree by the cage to answer his rival singing nearby in the Nichols place.

Rhody, sparrow-hawk and jay

At 10 A.M. Julio called my attention to a hawk sitting in the top of one of the pines at the north fence. It proved to be a sparrow hawk. As I watched, Rhody came walking along the road. The hawk swooped down at him from a height of about 50 feet clearing him about two feet. Rhody was not much alarmed; did not freeze and walked off to climb the tree from which the hawk came.

As the hawk was rising from its stoop three California jays gave chase and followed it over a curving course for several hundred yards. There were various cries, but I did not see the end.

In a few minutes three thrashers were scripping in these pines and one of them began to sing. This one sailed down into the baccharis-covered slope to the north and, on call, came back toward me but would not come close. It was not Neo, for I found him at the oval lawn ready for a new lot of worms. I was not certain of his identity until he went up into the surrounding shrubbery and began to sing, using his "secret-victoree" motif. (10:45. Still singing there. Rhody still in low branches of the pine).

After being in his house No.2 at 3 P.M., Rhody finally changed to No.1 for the night.

September 27th.

Some rain during the night, ceasing at 7 A.M. Much thrasher song "all over" during the forenoon and much here during the afternoo Neo and N2 came to get worms.

About 11:30 there was a tremendous volume of thrasher song concentrated about the house; Neo and mate on south side and Dux1(?) and mate and perhaps others on north side. Rhody seemed to be interested and stayed for a long time on the roof of the shop near the "center of gravity" of the chorus. This kept up for over an hour and finally faded away.

Neo and mate remained much at home during the afternoon and both were easily persuaded to come to me for worms.

Rhody needed four of the small mice to keep him happy; was seen to visit the owl once and again slept in No.1. (Max. during the day 76°).

September 28th. to 30th , incl.

During this period thrasher song was usually first heard in the early morning,coming from the west, remaining in the garden for an hour or so, where more than one bird could be heard. Thereafter the trend was toward song to become more scattering as if each bird was singing from or near its own territory. Occasionally there were gatherings at points one or two hundred yards away, but few birds seemed to participate in them. There was nothing like the concentrated "conventions" of the past few weeks. They seem to be over.

Rhody remained home most of the time, but slept each night in his house No.1 on the west lot.

October 1st to 3rd, incl.

One good rain during part of one forenoon and threat of rain throughout the period. Thrasher song continued to follow the pattern of the preceding three day period, Neo singing often at home and almost invariably being joined by his mate shortly after sounding off. There was occasional exchange of song along the north pines and once Neo, his mate and two other thrashers were together in the trees in the garden and there was much song and talk, resulting in the strange pair going off to Inver territory, followed (but not chased) by Neo and N2 where they halted at the north pines and then returned to the garden. There was no fighting.

Neo and mate foraged much at home and accepted worms tossed to them.

Rhody continued to sleep in No. 1, generally starting for his house before 4 P.M. A few times he was seen to take a peep at the owl, but this bird seems no longer to inspire fear in him.

October 4th. (Sunrise 6:08; sunset 5:40).

Alternate sun and shadow so far (10:30 A.M.) with rain threatening. Neo opened with song from the west; came home and has

been singing often ever since. On invitation he came down from an acacia by the cage and was given worms. His mate was not with him and he seemed anxious as to her whereabouts.

Rhody had his first mouse about 9 A.M. and at 10 o'clock followed to the tool-house where he was content merely to look at one offered him. Thereafter he entered the shop to have a squint at the owl, showing no excitement. When he sat on the wall to sun himself I got the owl and showed it to him. He seemed completely indifferent to it ten feet away.

Rhody's moult.

Rhody is still in the moult. His crest is still ragged; his belly feathers are thin and his tail feathers have not yet all grown to full length. He still removes quantities of sheaths.

Yesterday at 4:10 P.M. he was found already in house No.1, in full sun. While I watched him he tried to eject a pellet without success.

10:50. Neo not having been heard for several minutes, I went out and found him in the garden. He came quickly for worms, followed shortly by his mate, who also had worms. This looks as if he had really been trying to get her to come home and that was the object of his song.

A half hour or so later when he and N2 were still foraging together near the N.E. corner of the place I tried them out to see if their attitudes toward Hamburger stake had changed since it was discovered, some months ago, that Neo would eat it but N2 would not. Neo at once accepted small bits tossed to him, "preparing" them as thrashers do meal worms which they intend for their young, then eating them freely. Their stickiness bothered him somewhat so that he had to wipe his bill with his feet. N2 was attracted by them but would not pick them up. Hence their attitudes have not altered at all.

About noon, as I was planting a large Valley oak acorn* in a pot, Rhody came and hung around me. This meant mouse; in fact it meant two mice--small ones.

At 3:10 he was not to be seen, so I went down on the west lot and found him preening in a tree. He pretended to take no notice of me, but when I was about to disappear from his sight in the direction of the house, he followed after me all the way to the tool-house, running, stopping, and half flying to regain ground lost by his pauses. Another small mouse. He was now undecided as to whether he needed another or not, so meanwhile went to look in at the stuffed owl through the office window, following this act by wandering about the upper garden aimlessly. At last he started for house No.1 and was on the point of disappearing when he looked back and saw me walking east in the general direction of the tool-house. This settled his problem and he came running after me for the fifth (small) mouse of the day. We have here, perhaps, an example of Rhody's being near the saturation point in the matter of food with no inward promptings of sufficient magnitude to enable him to diagnose his needs with precision! About 10 minutes elapsed between the two mouse-eating acts.

At 3:40 he no longer doubted what his next move should be and trotted off to the west down the former road en route to house 1.

(Clear, calm, 69°).

* From the Cal. woodpeckers' tree at Meadow Lark dairy

October 5th. (Sunrise 6:09; sunset 5:48).

3:46 P.M. (Calm, sunny, 66°). Rhody settled in his house No.2 , in the eucalyptus tree,at precisely 3:40 P.M. It remains to be seen whether he remains there. I see no reason why he should not have gone to No.1. (See below for final status).

Yesterday he had five mice, as recorded; today he has not wanted one, apparently preferring meat and perhaps doing some foraging for himself.

The thrashers have been very quiet today: a little song in the early morning and thereafter almost complete silence. I did not even see one until coming here to write this entry after watching Rhody go to bed. Then I saw one on the oval lawn and tossed it worms, which it accepted eagerly.

10 P.M. Well, at 4 P.M., visitors (M.D.C.,Mrs. Symmes, E.D. were taken down to see Rhody in his house; but he was on the path in the orchard 50 feet away, standing stock still apparently awed by the presence of so many persons, but curious at the same time. As he had made a step or two toward us, I thought he might be hoping for a mouse, so got him one. He did not want it. I then thought he might want to go back to the house after all, as he still stood there facing us. We were in his path to the house so retreated and he advance a few feet. We left him then. I went out at about 6 P.M. and could not see him in the house, but he may have been there as he sometimes lies so low in his nest that he can not be seen. I now went down to No.1, but could not see him there either. A little before ten o'clock I again visited both houses, not seeing him. I suspect he is in No.2, but do not know.

October 6th.

Thrasher song at 5:45 A.M. continuing intermittently up to 8:45. At that time volume increased and three thrashers were singing in the pines at the north fence and one was scripping in the garden. This latter returned to the oval lawn (N2). I went there and Neo came down from the pines to join us. He was given worms. Song from the pines had now ceased. The picture seems to have been Neo (N2 on the ground) and two thrashers from the adjoining north territory (Inver's) discussing boundaries. I doubt if this can be classed with a full convention. In the early part of it Rhody climbed one of the pines as if to listen.

Intermittent song continued throughout the forenoon: a contrast with yesterday.

The morning was clear; but a heavy shower occurred about 11:3 lasting until about 12:30. It then cleared entirely. Thrashers began to sing in the court. Neo and N2 were there, pretty wet, and came for worms.

Rhody was now drying himself in the sun in the cage, but came out for his mouse.

Before 4 P.M.he was in house 2. At 4:45 I spoke to him from a distance of 50 feet and at the level of his house. He sat up at once, then sailed down and instead of coming to me headed for the west lot. I found him in the clearing trying to make up his mind what next to do. He wanted neither mice nor worms, but when I turned back to the house, followed part way, then changed course to the orchard, thence to the house he had just left (NO.2) and was in it again, after looking and listening carefully in all directions, at 5:07½. There it is again: another return to 2 after having apparently decided against it. Again;what part, if any, did I have in

causing him to return? Also will he stick it now?
6:05. Well, he did not. He is in No.1.

October 7th. (Sunrise 6:10; sunset 5:45).

Thrasher song first heard at 6:00 A.M. From then on Neo sang in the garden continuously for over an hour. It then became quiet except for occasional bursts of song.
At 9 A.M. I found him digging near the east fence. He came promptly for worms. N2 could now be heard scripping near the oval lawn about 100 yards away. Neo now began to call in rich, varied phrases while still at my feet getting worms and digging. N2 would not come, so Neo left on foot to look her up, still calling. They met at the old oak ,climbed it and Neo began to sing while N2 sat 2 or 3 feet from him and occasionally joined in song, using phrases differing from his. In 15 minutes they sailed down to the orchard.

4:20 P.M. Both thrashers seemed to remain at home most of the day and Neo was given worms several times.

Rhody was not seen until 1:50 P.M. when he came to the cage to get his meat. A short rest and he began his teasing of the magpie with beak-rattlings, display, etc. His rattlings were both with and without voice. This lasted for more than an hour. A quail was in the cage at the same time, having been there since early morning. Rhody discovered it in the bushes; gazed at it for a time; ignored it thereafter. The quail was not much frightened either of him or me, and ate in the cage in the open. When Rhody left I drove it out.
At 3:15 P.M. Rhody was lying in his house No.2. I'll bet he finally goes to No.1!

4:50. He is still there. (60°). Cloudy.
5:40 " " " "
6:15 " " " " (Looks as if I lose my bet).
10:55 " " " " I lose. Will pay Rhody in mice! 56°

He wanted no mice during the day. Evidently the two pieces of meat,together with the results of his own foraging, proved sufficient for his needs.

October 8th.

9:20 A.M. (Cloudy, looking as if it might rain any minute).
At 9:10 A.M. I found Rhody just coming down from house No.2. He wanted nothing from me, although he followed part way to the tool house. On the driveway he began to make frivolous gestures: full of pep. He next stretched out his neck horizontally and stared fixedly northward; then, like a streak, he ran in the direction of the cage, sailed over the fence and began one of his rattle-booing circuses through the baccharis on the north slope, in and around a flock of about 20 quail feeding there. They did not seem to mind it much. He now composed himself to saunter about leisurely and I came in to make this record. I could see no reason why he should appear so happy at this time of day, when he had apparently just arisen and had had no food; so I questioned Julio and found that he had "handed" Rhody a mouse on the end of a long pole about 7 A.M., while he was still in bed, and that he had watched and found that Rhody had not come down until I saw him doing so. This accounted for the bird's light-heartedness and spirit of exhibitionism.

Rhody stays in house 2 for about 18 hours.

It will be seen that he remained in his house 5 minutes less than 18 hours and appears to be repeating last year's pattern of the season.

9:20 P.M. It did not rain after all, but remained cloudy most of the daylight hours. After his initial livliness Rhody subsided and was pretty meek, evidently not liking the gloomy weather. He had two pieces of meat and two mice. The last mouse about 2:40 P.M. There being nothing else to do, he went to bed at 2:55 P.M. and stayed there--house No.2 again. This, I believe, is the earliest record we have for him this autumn. If I did not know from past experience that such behavior is to be expected from him at this time of the year I might think there is something the matter with him.

Rhody goes to bed at 2:55

During the day the thrashers were about frequently, but no strangers were seen or heard. Neo accepted worms several times and sang often during the forenoon. His earliest song was about 6 A.M. (5:58).

October 9th

Clear and mild all day. Max.72°. Thrashers again were heard at about 6 A.M. and, as far as they were concerned, the day was about the same as yesterday, except that, due to the presence of a hawk, there was a long silent period beginning about 8 A.M.

A little earlier (Julio) a hawk was trying to get at the magpies and persisted for "half an hour".

Rhody was not in his house at 8 A.M. and kept out of sight most of the forenoon, but in the afternoon behaved as usual. He went to NO.2 at 3:20 P.M. and stayed there all night.

October 10th. (Sunrise 6:13; sunset 5:41).

Thrashers first heard at 6:10 A.M. No strangers during the day. Neo and mate at home much; occasional song and coming for worms.

Rhody was still in his house at 8:20 A.M., but Julio had handed him a mouse with the pole earlier. He was down before 9 and stayed home most of the time. He went to his house NO.2 at 4:10 P.M. (65°)--a day like yesterday.

October 11th (Sunrise 6:14; sunset 5:40).

There was early thrasher song at home (not timed). Scattering song in various directions until, at 9:30, Neo began to sing from the almond tree a few yars south of the oval lawn. Almost at once answering song came from Brokenwing's territory several hundred yards away and N2, in the bushes at the oval lawn, began to add occasional phrases. I stationed myself between the two birds: Neo 20 feet to the south, N2 almost overhead 15 feet away, and tossed a few worms. N2 was the first to respond, followed shortly (reversing the usual order) by the much bolder Neo. When N2 began to work off toward the east slowly, Neo gathered a few worms in his bill, sounded the "blue-bird" call note as he ran toward her carrying the worms. He followed her up into the bushes at the fence at a point 50 feet from me, but I could not see whether he actually gave her the worms or not. In any case, this is a distinct manifestation of marital relationship: the most definite since the nesting cycle expired some months ago, and further confirming the evidence afforded by Brownie and his two mates, that thrashers remain paired throughout the year (probably also for life).

Neo gives definite indication of marital attitude toward N2.

Rhody was already down from his house at 7 A.M. and was given

a large mouse by Julio. Shortly after he indulged in play about a covy of quail on the north slope, circling about them with more or less display.

He wanted no more mouse during the day, but came to the tool-house while I was there and was given a large one, which he killed and abandoned, then left. I went to him (50 feet away) and offered a small one in the palm of my hand. This he took, but dropped indifferently. I thought he was not hungry, naturally, but he shortly went to the cage and ate a piece of meat. Therefore, we apparently have a case here where he clearly used discrimination in the selection of food, as to kind. (About 3 P.M.).

He went to house No.2 at 3:20 P.M. but did not remain there; finally going to No.1 for the night.

October 12th.

Little song.

Very little was heard from the thrashers today. (Max.82°).

Rhody absented himself during the forenoon and, on his return wanted no mouse. He went to house No.2 at 3:19, but again finally slept in No.1.

October 13th (Sunrise 6.16; sunset 5:37).

Thrasher song scarce.

Up until now (3:15 P.M.) no thrasher song heard, but some scripping and the birds are here off and on. Hawks about.

Rhody again absented himself during most of the forenoon. On his return about noon, he had meat and wanted no mouse. A little later I went to him where he was sitting in his No.2 "optimum tree" and he was pleased to take worms from my fingers as long as he did not have to move his feet! A second helping of meat about 2 P.M. satisfied his requirements until about 2:30, when he presented himself for a big mouse. At 3:03 (Cloudy, sultry, 73°) he settled in his nest in No.2 house.

At 4:25 he was not in No.2 and I supposed he had gone to No.1 but, at 5 P.M., he was back in No.2.
6:45. (Cloudy, 66°). He has stayed in No.2.

October 14th

Song renewed on cool morning.

A dull morning; marked drop in temperatures: 58° at 9 A.M. Rain threatening. Whether it is a mere coincidence or not, this change has been accompanied by renewal of thrasher song.

There was early song here (not timed) and, at about 9:30 A.M. Neo began to sing loudly from his favored pine. N2 soon appeared running on the driveway and climbed up to join him. Almost at once a thrasher from the north (Dux 1, Inver?) began to sing fron a pine on the north side of the house. This bird also appeared to be accompanied by a comes, although I could not be absolutely sure. At 10:15 song gradually died down.

Rhody had already left house 2 by 7 A.M. and was found by Julio in No.1 about 9 A.M. He refused offerings of large and small mice. Later he came up and had changed his mind. The day turned out fair after all. Rhody again went to NO.2 first, stayed for aome time, but finally went to No.1 for the night.

October 15th.

Thrasher song first heard about 7 A.M. coming from Neo's inner sanctuary. Two hours later I went down there when all was quiet and found him still there, ready for worms.

Rhody apparently foraged abroad until the early afternoon and then he wanted nothing from us, going to house No.2 at 2:30 A.M., but, in the end, sleeping in No.2.

October 16th.

A warm, fair day. Moderatley early thrasher song by Neo from his inner territory, followed by his and N2's foraging extensively in the garden where, about 8:30 A.M., both were pleased to receive worms from me; Neo as usual, getting the lion's share and not respecting his mate's desires at all. Both then climbed the favored pine; there was some song and thereafter little.

Rhody mastered a very large mouse about 7:30 A.M. with little difficulty, then remained secluded somewhere, returning for meat about 3 P.M. (Visitors may have made him shy). He went to house 2 at 3:50, but, at 4:20 was no longer there. I supposed he had gone to No.1 and found him about half way there. (Accipiters had flown overhead a few minutes before). When I saw Rhody he turned and ran back toward No.2 and reappeared so quickly a considerable distance from me that I thought there might be a second road-runner present; but there was not. The last 50 feet or so he covered in leisurely fashion, returning to No.2 at 4:35.

At 6 P.M. he was still there and will doubtless remain for the night.

October 17th.

Too busy today to keep in close touch with the birds; but there was early morning song by the thrashers and both Neo and N2 were given worms once or twice. There were no gatherings.

Rhody, about 10 A.M., on being invited to come for a mouse, first indulged in one of his fits of exhibitionism, cutting fancy curves through the bushes and rattlebooing, then came meekly for a large mouse which he handled without difficulty.

He changed back to No.1 house for the night. These shifts are mystifying.

October 18th. (Sunrise 6:21; sunset 5:29).

I had to neglect the birds again today for several hours. There was early song from Neo's pine, but I did not get into touch with him during the day.

Rhody was first seen at 10:A.M., when he came into the cage while I was in there to see if he had eaten his meat. He had not, bu now preferred it to mice. He was given a mouse by Julio about 3 P.M.

I found him in his house No.2 when I looked there about 4 o'clock. He was plainly concerned about the children kicking a football around in the street near his tree--sometimes at the base of it. I went out again about 4:15 to see how he was standing the increased clamor of the youngsters, who now numbered a half dozen. He was very nervous and, at 4:20, could stand it no longer, popped out of the house and ran swiftly up the bank into the garden. I could not find him, so went down and stood by No.1. In a few minutes he appeared approaching the ladder tree. The upper rim of the sun was about to disappear below the San Francisco hills across the bay, and the light was rapidly fading out in a gorgeous sunset. He entered his house at 5:33½.64°In this incident we have undoubtedly one

clear-cut instance of his having abandoned No.2 impelled by fear.

October 19th.

No thrasher song at all today: a rather warm day with maximum about 80°. (Perhaps significant.

Rhody did not go to house No.2 at all, but went directly to No.1, probably fearing a repetition of yesterday's clamor at his bedtime. If so, his judgment was sound; for today was worse than yesterday. At sunset 68°.

October 20th.

Temperatures like yesterday's and again no thrasher song at all.

Rhody, forgetting about the football hazard or perhaps willing to take a chance, went to house No.2 at the early time of 2:53. During my absence Julio invited him down for a mouse about 4 o'clock. He had had none during the earlier hours. He accepted and returned to NO.2 in twenty minutes or so and is now (6 P.M;70°) still there. The children did not play football in the street by his house today, but Rhody was obviously not quite at ease, as if expecting disagreeable developments; but when nothing occurred, settled comfortably to rest.

October 21st.

Thrasher song began at 6:15 A.M., i.e. I was awake then and heard it. It seemed to come from Neo's intimate territory.

At 7:35 (58°) sunny, calm, Rhody was still lying in his bunk in No. 2 evidently much at ease, both in body and spirit. He looked bright and cheerful without a worry in the world. Other birds were actively foraging or singing--the jays gathering acorns--but Rhody lay quietly gazing,now at the ceiling of his house, now down at me, then touching things lightly with his bill--a picture of indolence. Once he stood up as if to come down in response to my invitation, but it proved that all he wanted to do was to adjust something in the bottom of his bed with his bill. This arranged satisfactorily, he settled down firmly with, I imagine, a sense of luxurious ease.

I left him then. At 8:30 (J) he was still there; but a little later he had gone. 62About 9:30 he appeared at the cage, wanted nothing and wandered off to his second-choice optimum tree where, at 10 A.M., I found him again at ease, resting his breast on a limb, his tail supported by another one,in the same spot, occasionally looking up into the sky in a dreamy sort of way, at a hawk far above. (This hawk was so high that it was some time before I could locate it after Rhody had directed my attention to it).

By noontime (68°) Rhody had not stirred from his tree.

At 1:20 (79°) he was still there but now standing up on the limb looking very bright and attentive. He came down on invitation (taking his own time about it) and started to follow me to the toolhouse, but branched off at the cage, entered and gazed cautiously down into his meat dish (fearful of the yellow-jackets in it) at last snatching a small piece hurriedly. After swallowing it he sauntered over to where I was stretched out in a long chair and gazed round-eyed at "everything": tree tops, me, the chair, pebbles on the ground it was as if the world was an entirely new phenomenon to him. He turned his head to listen in the direction of each new bird sound and once or twice started toward it. He was not nervous at all; appar-

ently, just as I have said: more than ordinarily interested. He

wanted no food from me, but once hemoved still closer and seemed about to jump up into my lap, but did not. Finally he wandered off to sit on a bank by the shop yard, still appearing to marvel at the wonders of nature. I went up to him and held a meal-worm an inch or two from his bill. He merely looked at it cross-eyedly. He seems to be in a mood of trustful naivete, like a child.

As far as known, this one piece of meat is all he has had since bedtime yesterday.

After the first short period of thrasher song noted above, nothing more has heard from those birds (2 P.M.) but Neo, about 1 P.M. came for worms tossed for him at the oval lawn. (Note that this is a rather warm day).

Although there was no noisy collection of youngsters in the street near Rhody's house No.2, he did not go there at all, but to No. 1 for the night. He wanted no mice today.

Screech owl. Late in the evening a boy and a girl brought a screech-owl which they had found in apparently helpless condition. The bird was put under observation in a small cage. I could see nothing wrong with it.

October 22nd. (Sunrise 6;25; sunset 5:23).

Earliest thrasher song heard at 6:15 A.M.; thereafter very little during the day. The function of this short, early song seems to be to summon the mate, since male and female do not ordinarily roost together.

About 8:30 A.M., without moving more than 100 feet, the following birds were seen or heard in the garden (about 63°):

1 Quail, dozens,
2 Ruby-crowned kinglet, several,
3 Hermit thrush,one (This one took worms tossed to it).
4 California jay, several,
5 Flicker, one,
6 Bushtit, dozens,
7 Bewick wren, two,
8 Robin, two or three,
9 Gambel sparrow, several,
10 Nuttall " , "
11 Golden crowned sparrow, several,
12 Song sparrow, several,
13 Brown towhee, "
14 Spotted " , "
15 Purple finch, one or two,
16 House " , " "
17 Greenbacked goldfinch, one or two,
18 California thras~~s~~her, two (Neo and N2 coming for worms)
19 Road-runner, (Rhody, looking me up to get a mouse while I was engaged with the thrashers)
20 Wren-tits, two ("Always" not less than two).

(It was only by chance that Steller jays and Anna hummingbird were not seen here at this time: a ten minute period).

Rhody wanted nothing more from us after the mouse and again went directly to house No.1 for the night, although there was no collection og kids near No.2. (Max. during day 80°).

October 23rd (Sunrise 6:26; sunset 5:22).

Earliest thrasher song heard at 6:10 A.M.; apparently Neo from his favored pine, summoning his mate. Song ceased in less than a minute. When I went out about 8 o'clock thrashers were scripping in the distance (east) but soon one came and got worms from me. A female spotted towhee, attracted by this affair, also cam and took tossed worms. Short thrasher song sounded from the south. The bird being fed climbed the old oak and began to scrip:an N2 characteristic reply to Neo's calling, which in this case probably repres~~t~~ented the facts ofthe matter. (64°, overcast).

Rhody did not appear until about 12:30 P.M., when he entered the cage for meat. On coming out he performed one of his circuses with rattle-boos . A short rain drove him to shelter under the roof over the well in the Nichols' garden. About 2:30 he suddenly appeared where I was working in the garden, no doubt to direct my attention to his need of a mouse. He partly led to the tool-house and was accommodated. He next watched me working for the next 15 minutes and, during another short shower, approached house No.2 slowly, entering it at 3:15. A half hour later the scolding of wrentits in the thicket of the west lot indicated (as was proved by my going to house 2 and finding it empty) that Rhody was on his way to No.1.(64°)

There was no further thrasher song during the day.

October 24th.

The rain of yesterday amounted to little and it was clear at sunrise this morning. No thrasher song was heard during the entire forenoon.

At 11:30 A.M. Rhody, who had not shown up in the garden, was found at his old post on the west lot which, in former years, he has begun to favor at this time of the year. He was not impressed by my appearing upon the scene at first; but eventually he came to call and followed all the way up to the tool-house, rattle-booing once when I turned back to urge him to put on a little more speed. He accepted a large mouse and disposed of it quickly.

Rhody's moult.

As far as I can see Rhody's moult will be about finished when the shorter of his two middle rectrices grows about 2 inches more. Yesterday this short one was laid over the long one, hiding it completely except for the last couple of inches. This morning the short one is completely hidden under the long one; this conforms to road-runner habit, as noted herein long ago, for as stated earlier, the positions of these two feathers are interchangeable.

Condition of the screech owl.

This bird accepted live mice from hand and ate them when first they were offered and has not refused them since. He seems to be satisfied with two a day. Today he was transferred to a compartment of the outdoor cage and the magpies were confined to the larger one. He flies from perch to perch when he wants to, without apparent difficulty. I can see nothing the matter with him. If alarmed he makes popping sounds (not snapping) and frequently utters soft quavering coos which may be followed by the typical screech-owl "song". Too bad these birds were named as they are, for all their notes are soft and melodious.

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Experience with a Golden-crowned Kinglet.

About noon Mrs. Scamell and I were exchanging comments across the street in country fashion when a bird struck the window behind her and fell to the porch. I went over and found that it was a golden-crowned kinglet, gasping laboriously with opening and closing bill. It was brought home and placed in a small cage, where it was just able to stand shakily with depressed bill and labored breathing. In about an hour it had tucked its head under its feathers and was not breathing with so much difficulty. An hour or so later I found it had been able to fly up to the only perch in the cage and was resting quietly, head tucked in as before. When I touched it gently it withdrew its head, saw me and twittered, but showed no fear. It was left undisturbed for another hour or so. When it again was aroused from its sleeping posture with a touch, a stalk of ivy on which aphides were gathered was held up to it and it istantly began to pick off the insects one at a time, absolutely without show of fear. When I touched its feet it transferred to my hand and continued to eat. It was now bright and cheerful in appearance seemed to recognize me as the source of the food supply. When it returned to its perch, working from the outside (as the cage was small) I transferred bird and perch together outside without frightening it. It continued to sit there and peck hungrily at small speck on the perch and on my hands. We were now fully in the open and after a few minutes (presumably actuated by desire for more food, as my supply was exhausted--certainly it was not afraid in the least) it flew up into the branches of an oak overhead and began to forage vigorously and getting results. There it was left, apparently restored to normal.

I had never seen a wild bird in possession of all its faculties--as this bird apparently was--show such complete absence of any fear reactions,when being handled by a human being for the first time.

Rhody slept in No.1.

October 25th.

No early thrasher song at all was heard.

At 8 A.M. (bright, clear, calm, 63°) Rhody was discovered sitting quietly in tree 9 (Map, p. 1313A) on the west lot: a strange place for him to be at that time of day. On being spoken to, he dropped to the ground promptly, came to the fence, flew over and trotted along behind me to get his mouse (a large one) at the tool house.

At 9 A.M. (66°) he was seen putting on a show inside the nort fence apparently for the benefit of the flock of quail there. He then went to his second choice optimum tree to rest and look down at the quail. Shortly after I left him there, frantic alarm notes were heard from the quail and the explosion of their wings. I rushed over there quickly, because if Rhody were responsible for the turmoil it would have been a new manifestation by him. I found him still in his tree, but crouched low in watchful, semi-frozen attitude He too was alarmed. It was a hawk raid. I had not seen the hawk, but Julio had and I met him bringing me a gun in anticipation of its being needed.

10:00 A.M. Rhody still there, relaxed. (72°). I held a meal worm near the end of his snoot; he merely rolled his eyes down at it, like a goldfish looking at something on the bottom of its bowl, and looked at me speculatively, calm and self-possessed.

11:45. Still there ; his digestive process on the mouse has proceeded to the stage where he can devote some attention to preening. His tree is now in the full shade of an oak. (78°).

1 P.M. Still there; very comfortable; no cares.(79°). The most conscientiously thorough "rester" of any bird I know.

Rhody has spare time on his hands and doesn't know what to do with it.

At 1:45 (80° plus) Rhody had come down, eaten meat at the cage, come out and was confronted with the dilemma of what to do until bedtime. All of his bodilyneeds had been satisfied; there was no sense in going back to the tree to rest some more--there was nothing at all that needed to be done and there was nothing to frighten him. It was too early to go to roost. I sat in a chair about 8 feet from him and watched. He was clearly without definite aim of any kind and strolled slowly about near me hoping for something to turn up.

A branch of a pyracantha nearby stirred--probably a hermit thrush eating the berried. There was something! So he glided over toward it with neck stretched eagerly forward and stared. Nothing happened. Ah! It was hot enough for a spread-eagle sun-fit; so that was performed briefly. Looking up into the trees suggested nothing. A glance at the sky revealed no hawks. Well, we can dust anyway. So that was quickly done;but the world was as blank of events thereafter as before. Inspection of me from a distance of 8 feet brought no relief from boredom. There's a drinking dish over there, so we'll try that. Still nothing left to do; so we'll inspect the rainy-weather shelter under the old oak. Nothing remarkable there, but a ruby crowned kinglet approaches through the branches of an elderberry to observe the road-runner and this touches off the trigger which releases a brief circus for the kinglet. Hah! What's under this leaf? Nothing. Now to the sage patch 15 feet away; another glance at the sky:no hawks; but carpenters are building a house in full view about 100 feet beyond the entrance, so there is somethin to engage the attention of eyes and ears for a while. 2:15; I left to write this note.

He again slept in No.1.

October 26th to 29th, incl.

During this period, except for a little song one morning, the thrashers were quiet and, moreover, were seldom seen, although Neo came to me twice for worms. No distant thrasher song was heard either.

Rhody is slipping into his seasonal habit of decreasing his food intake and spending more time on the west lot. He is at present satisfied with not to exceed one mouse per day and perhaps one piece of meat. On one of these days he wanted no mouse and had only one piece of meat. He gets up late and wanders little.

During this four day period there was a little rain twice. Temperatures were mild with maxima running from 65 to 75.

Rhody slept in No.1 on three nights and in No.2 once. On the latter occasion he went to bed at 2:50 P.M.

October 30th and 31st. (On the 31st: Sunrise 6:34; sunset 5:15).

No thrasher song during this period and my birds seldom seen here, although Neo came for worms once when he saw me feeding Rhody. No distant song heard.

Some rain on the 30th. On that day I found Rhody in his hous No.1 at 10 A.M. He came down when he saw me and followed part way to the tool-house and then stopped by the N.W. corner of the house, listened to something off to the north, then disappeared through the hedge. For several minutes I could not find him . (It was raining a little). I got a mouse and returned to where he had disappeared. He came out, ate the mouse then climbed up 8 or 10 feet in a pine growing just outside the retaining wall of the road near the N.W. corner of the house. This gave him shelter from the rain (which stopped about noon) and a commanding view over a wide area to the

An extraordinarily long period of immobility by Rhody.

north and north west and down into the sheltered valley below. Here he sat on the same limb of the same tree without shifting his position until 3:05 P.M., at which time he began his leisurely stroll toward house No.1. This one mouse was undoubtedly all the food he had during the day. He seemed perfectly content to while away this long period(of about four and three quarters hours) doing absolutely nothing but watching events down in the valley (Children, dogs, motor cars).

On the 31st. Mr. O'Neill brought Mr. Duff and young daughter to see Rhody. We found him in his house No.1 at 9 A.M. and stood at the tree. He was not frightened and obligingly came out of the house after we had been there several minutes and sat quietly in two or three different places in plain sight in the tree (about 10 feet from us) and looked at everything else in the world but us. When we left he stayed there for a time, then took up his old look-out place on the west lot, remaining there for hours.

About 2:30 he came up for meat and mouse and went up to No.2 at 2:50 P.M. He was still there as darkness fell.

9:30 P.M. (Raining slightly). He is still in No.2.

Now why does he change from one house to the other?

November 1st

Good rains during last night, clearing up about 9 this morning, at which time Rhody was still in his house No.2 in the eucalyptus tree.

A few thrasher calls sounded from the east.

Rhody moved to a limb close to his house to sun himself and was there at 10 o'clock. At 10:30 he was playing with the magpies, but was glad to see me appearing upon the scene and dropped down from the roof of the cage promptly to follow me to the tool-house, where I gave him a huge mouse, as from his behavior, I judged that he would not quibble about its being too big. And so it proved.

The rest of the day alternated sun and shadow, mostly the former, Rhody staying at home to lie in sunny spots on the ground. (Temperatures in the low sixties). At 2:50 he had had enough "activity" for the day and proceeded toward his house No.2, which he entered at 3:09.

While he was climbing up to it Neo was digging silently (and alone) near the base of the tree and came to me for tossed worms. He refuses to become as tame as Brownie and is still timid.

Rhody, in house No.2, successfully resists temptation to flee from noise.

About 4:20 the screeching gang of children renewed their football activities in the street by Rhody's tree and kept it up until darkness fell. Two yelping dogs were with the children (6) and most of the clamor was within 25 feet of the base of R's tree. He was tempted to decamp, but managed to restrain himself this time and, at 8:30 P.M. (horned owls hooting in the garden) was still at home. (Calm, brilliant "5/8" moon sailing in and out of patches of white clouds; 54°).

Now this occasion was just as noisy and as hazardous as the other one on which Rhody fled in fear; yet this time he stuck. Has he learned so quickly that, although it is trying to the nerves of road-runners, there is no real danger? Also why, the last two days, has he decided in favor of No.2 again?

November 2nd

Rhody was still in No.2 at 9 A.M., but went to the west lot shortly thereafter. Julio gave him a mouse there and he did not

come up to the house at all.

I happened to be driving by No.1 at 4:35 P.M. and Rhody was only then making his way up through the ladder tree. He entered his house at 4:37.

No thrasher song was heard today anywhere within hearing distance and Neo was seen only once, all alone, at the oval lawn and given worms.

November 3rd. (Sunrise 6:37; sunset 5:10).

No thrasher song heard during the day and Neo not seen; neither was his mate.

Rhody spent most of the day at or near his post on the west lot. I told Julio not to give him a mouse until I saw whether he would come up here. The result was that Rhody finally came up about 2 P.M. and got meat from the cage. He went into house No. 2 at 2:42 66°) but did not stay, eventually going to No.1, where Julio "handed" him a mouse by pole about 5 P.M. His food requirement continues to be small--at least he wants little from us--but he presumably forages more or less despite his present sedentary habit.

I do not see him hunting for lizards any more and the supply of these creatures (which I thought he would practically exterminate) seems to be on the increase, if anything.

November 4th to 8th, incl. (On the 8th: Sunrise 6:42; sunset 5:05).

No thrasher song heard during this period and thrashers seldom seen. (But see last paragraph).

A period of fair, mild weather, except that it wss overcast on the 4th, with maximum temperatures running in the high sixties and minima about 52°. [illegible]

Rhody patronized his west lot post every day, but with the exception of the 4th, came each day for one mouse, usually on being called from his post. On the 4th, he wanted nothing from us at all. At present one mouse per day seems to be enough for him, but occasionally he adds one piece of meat.

Rhody's moult.

His two middle rectrices are not yet quite of the same length He seems to have finished pulling off the "dandruff".

During this period he slept in No.1 every night, but often went to No.2 first, only to leave it for No.1 finally.

The foregoing was written about 4 P.M. on the 8th. A little later Neo and his mate appeared at their inner sanctuary and there was a short series of songs. Julio went down and gave Neo worms, his mate remaining offish.

November 9th. (Sunrise 6:43; sunset 5:04).

Renewal of thrasher song and re-establishment of friendly relations.

At 6:33 A.M. thrasher song began in the garden and lasted for about 20 minutes. There appeared to be one principal singer and one other interjecting a phrase now and then, conforming to the Neo-N2 pattern when in the same tree.

At 8:20, all being silent in the garden, I went out to investigate. On reaching the immediate vicinity of Rhody's No.2 house tree, Neo came eagerly through the fence without having been called. He showed the greatest enthusiasm for worms, and confidence, manifested in many weeks. He talked to his mate out of sight in the bushes but scripping mildly.

My local supply of worms being exhausted, Neo joined his mate and I got more worms from the "wormery". As I approached the sage-patch, both Neo and N2 ran toward me. They were very hungry and Neo, true to form, ungallantly grabbed all the worms he could, although by using strategy, I was able to satisfy them both. (Clear, calm, 50°).

New "talk" by Neo.

At 9:05 I went out to the sage-patch. Neo came through his old opening in the fence in the fence and to the end of his old "varmint trail" in the sage, where he received worms from me, but not quite daring to take them from hand. He was full of new talk; repeating over and over again a peculiar phrase which can be only roughly approximated as:

" Talk, talk, Peter—talk, Peter, Peter—talk", the order of the words being altered from time to time and the timbre of the musical notes being of odd, reedy character not usually heard from thrashers. This reediness was applied sometimes to only one of the "talks", sometimes to all and sometimes to one or more of the "Peters" The result was great contrast in quality of tone between "words", thus again emphasizing the extraordinary versatility of thrasher vocalization. In conformity with thrasher habit, it is not improbable that this utterance of Neo's may never be heard again; or, on the other hand, it may so strike his fancy that he will use it as his basic theme for a an hour; a day; or what not.

An hour or two later I again looked up the thrasher, finding them in the brush by the fig tree. This time it was N2 who came first while Neo, strangely, looked on~~e~~ while she ate a dozen or more. Neo then came down for his share. His talk now was entirely different, both as to words and quality of tone.

The day turned out to be a dull and chilly one, but the thrashers, although silent when I was not ministering to their wants, seemed to remain at home all day and were easily located whenever I looked for them, being eager for worms. They were fed several times more; on the last occasion being joined by a female spotted towhee that, for the last few days, has been almost constantly present in the sage patch and has never refused to come out for tossed worms.

Except at the time mentioned, Neo did his best to get all the worms.

I did not look for Rhody at his post, but he came to the cage for meat. About 2:30 he went up into No.2. Julio found him there and invited him down. He came , but returned quickly. J then offered him a mouse on the end of a pole and Rhody ate it while in his house, so apparently he was hungry after all.

At 5:45 , pitch dark, he was still in No.2; so he has again changed sleeping place.

November 10th.

Thrasher song was first heard at 6:20 A.M., but it was very brief. One or two calls were heard during the forenoon, but thereafter, vocalization was confined to talk by Neo and his mate, who received worms from me five times during the day.

Brokenwing.

This bird is still at Mr. Sampson's

Brokenbill

Mr. Sampson says that he also sees this bird at his home occasionally and that, due to his inability to dig with success, he has adopted the policy of dashing at robins and other birds when they successfully

secure worms on the lawn, causing them sometimes to drop their prey, whereupon Brokenbill gets it. This habit is not a common thrasher trait and illustrates ability to adapt itself to changed conditions. S has also seen this bird attacked by Brokenwing. I really had expected Brokenbill to stay here since, as the notes show, he was making regular application to the suet pudding and had begun to accept worms from me.

Rhody hung around all day and was not seen over a hundred feet from his house No.2. One mouse was all he wanted, plus one small piece of meat. He again slept in No.2 and went there before 3 o'clock. (A chilly day, max. 58°, but warm in the sun).

November 11th. (Sunrise 6:45; sunset 5:02).

A day like yesterday.

The first bird heard in the morning was the hermit thrush, making its "chucking" call at 6:05. Next in order were heard: Nuttall sparrows, quail, thrashers: the latter scripping, only, at 6:15 precisely. The sky was without clouds and several of the brightest stars were still visible at this time. The thrashers sang not at all during the day, here; but were present most of the time, both Neo and mate coming rather freely for worms.

Rhody shows unexpected recovery of appetite.

Rhody was still in his house No.2 about 8 o'clock, but was out before 9. He wanted worms at that time, but no mouse. About 9:30 he came for a mouse. At 2:30 P.M. (he had been enjoying the sun on the south-sloping bank near his house 2 in the meantime) he ran toward me eagerly only to be frightened away by a truck going down the driveway. He disappeared into the orchard and was next seen waiting patiently at the tool-house door for me to arrive and get him a mouse. He has faith in his knowledge of my pattern! He was rewarded with a fine large mouse. I had not expected him to want a second one, but for some reason he was very hungry today--he had been given worms three times before this.

I thought now that he was fully "charged" and was so near No. 2 house he would surely go there and stay for the night again; but for no reason apparent to me, he went to No. 1. Why he does this shifting about is a mystery.

November 12th.

First thrasher song heard at 6:20 A.M. It stopped shortly and was probably by Neo summoning his mate --which is thrasher custom.

The coldest morning of the season, 40° at 7:15.

The day was sunny but with a chill wind and birds kept largely to the sunny slopes. Rhody, for example spending most of his time on the bank above the fig tree, near house No.2. He did not want a mouse until about 2:30 P.M. He elected to sleep in No.2 this time, entering it at 3:37 and consuming 20 minutes in traversing the last 12 feet of his course from the top of the fence.

November 13th. (Sunrise 6:47; sunset 5:00).

A "Polar Front" has swept down from the north, bringing minimum temperatures in the citrus districts farther south below the freezing point; in the Ojai Valley as low as 23°, and in other

inland areas of the state, including the southern part, minima of 26° to 32° were common.

Minimum here this morning 41°, **clear, calm**; many birds about the place; one of them coming into my bedroom at 6:40.

A little early thrasher musical calling--not timed.

At 7:30 A.M. (41°) I found Julio entertaining both thrashers by Rhody's No.2 house-tree. Rhody himself, 20 feet away, snugly stowed inside his house, looked down dispassionately upon our feeding activities. Besides the thrashers, one hermit thrush and one golden-crowned sparrow, came to have worms tossed to them.

Rhody in No. 2 again.

Rhody disgorges mouse.

Rhody again slept in No.2 house, going there about 3 P.M. He had been at his west lot post most of the forenoon, but had responded to call and followed to the tool-house for his mouse. This creature was all the way down the birds gullet, except for the tail sticking out like a cigar, when Rhody disgorged it hastily, looked at it intently, then ran away swiftly down the road and did not come back. He had eaten a small piece of meat an hour or so earlier.

November 14th.

At 7:30 A.M. not so cold as yesterday (51°). The day fair, calm and mild.

Early thrasher song not heard, but Neo seen and fed. N2 not seen. No song during the day.

Rhody spent most of the day at his post on the west lot, but came up for a mouse on being invited. **He slept in No.1.**

Probable reason for Rhody's preference for west lot at this season.

At this time of the year the shadows of the trees are long and my grounds are so full of trees that few spots in ~~it~~them from which there is a good outlook remain constantly in the sun. Cobsequently Rhody would have to shift position often. The south side of the west lot is without trees, but with scattered low shrubs. It has sun from sunrise to sunset and commands a wide view. Here Rhody can select a spot and not move for hours.

November 15th.

Thrasher short "calling" songs at 6:25 A.M., then ceasing for the day. At 7:30 A.M. 52°, sunny and fair all day. Neo seen and fed.

Rhody continued occupancy of his post on west lot, coming here for his mouse; then going to No.2, but again abandoning it for No.1 as late as 4 P.M. These changes are still a puzzle. Max. during the day 66°.

November 16th. (Sunrise 6:51; sunset 4:58).

First thrasher notes heard at 7:15 A.M.--late. Quiet the rest of the day.

Rhody continued occupancy of the west lot. Driving by at 11:30 A.M., I saw him at his post on the bank and went to him and handed him worms.

He came up for meat about 2:30 and then went to No.2 house at 3:14. Julio gave him a mouse there at 4 P.M.

A new probable cause of Rhody's leaving No.2 after going there at his bedtime.

At 4 P.M. I found him still in No.2, but he was restless and appeared to be picking things off of the wall and windows of the house and off of his feathers.

No insects were flying about and it occurred to me that ants might be bothering him, so I inspected the trunk of the tree and found ants going up and down in a thin column. (Not an unusual occurrence as regards trees here in general). I went to get "tree tanglefoot" and returned at 5:05. Rhody had been unable to stand the annoyance of the ants and had already left although the sun had already set. I applied the tanglefoot and went down to Rhody's house No.1; searche the vicinity and his regular routes to and from it without seeing him The brighter stars were out before 5:20, but no Rhody anywhere to be seen. With a powerful flashlight, the beam of which can be contracted to a slender shaft, I re-searched all probable locations, including the eucalyptus (e. amygdalina) in which is his house No.2, inch by inch. This tree is in full bloom (numerous small white flowers in dense trusses like bunches of grapes). These flowers, with the tan colored twigs, a few brown leaves here and there amongst the green ones; the white, green and brown of trunk and larger limbs, all together form, when viewed by artificial light, a pattern into which Rhody would blend perfectly. Anway I did not find him.

Bearing in mind the roadrunner characteristic of comparative night-blindness (See these notes as regards this characteristic of Archie and Terry) I was curious as to how Rhody would overcome that handicap, hence the long search. About 7:15 I had Julio go down to No.1 and have another look there. He came back and announced that Rhody was in it at last. This must have been a performance of some difficulty for the bird in the dark. He surely was not there at 5:30, 56°.

Here we have a case of Rhody's preferring the hazards of the dark rather than remain pestered (as I suppose) by ants in house 2. It seems reasonably certain that the ants were the motivating cause of this particular shift of sleeping place; and it may be that they have caused other changes by him.

Now, why the ants, all of a sudden? Well, as stated, the peppermint gum is now in full bloom and presumably the flowers contain nectar. Again, although roadrunners keep their nests, roosts and the surroundings immaculate (as regards droppings) I am reminded that, when R kills mice, they usually void urine and faeces and Rhody had had a mouse in his house a short time before. It is also possible that he may have carried a mouse there at some other time and abandoned it, so that the nest may not be clean now. This will be investigated.

The Screech Owl. This owl, brought me for attention some time ago--see notes--apparently has nothing the matter with him. He sleeps all day in a house within the cage and is given live mice to eat. He began ejecting pellets at once and has continued regularly. At night he comes out of his house and sits on a perch.

Rapid pupilary action of owl's eyes. In looking for Rhody, as reported above, I looked in the cage also and was mildly surprised to see the owl staring at me with pupils extremely contracted, giving him an odd appearance. I experimented by flashing the light off and on and was amazed at the rapidity of the reflex controlling this pupilary action. It is so rapid that, on turning on the light, I could get but a fleeting glimpse of the pupils in their expanded state. Almost instantly they would contract. As a guess I would say the duration from full dilation to complete contraction was of the order of 1/5 second. (But this is only a guess).. This proved a fascinating game which the owl did not seem to mind in the least.

The mice vs Rhody. Due to Rhody's autumnal decline of appetite and the extraordinary fecundity of the last batch of mice obtained from the Univer

sity laboratories, Rhody is not holding his own and the mice, during the last 30 days have gained rapidly so that they are now, in golf terms, over 100 up on him. In two weeks alone, 127 were born, and there have been more batches since!

November 17th to 19th, incl.

Rhody's nest in No.2 was examined on the morning of the 17th and found perfectly clean, with no ants present; but during this period he continued to sleep in No.1.
There was a little thrasher calling in the mornings, but no extended song. Neo was occasionally seen and given worms.

Rhody continued to spend a large part of the time at his post on the west lot, but came regularly for his mouse, remaining thereafter on the bank by the fig tree until time to go to bed.

November 20th.

Since the short chilly spell ended on the 14th the weather has been fair and warm with maxima running in the seventies.

This morning thrasher song was heard early and full song continued at intervals throughout the forenoon, moving from place to place. The impression was gained that an outsider was about .

New bird patients.

Mr. Cain brought a sick mud-hen (Coot) in the forenoon and curiously, a few minutes later, Mr.W.Madigan (875 Paramount Road) brought a male Anna hummer that he had picked up in his garden. This bird is unable to fly, is in perfect plumage and has most gorgeous head and gorget. No injury of any kind is apparent and it partakes readily of the "Kinzie" food mixture from hand. It shows no fear at all, no signs of suffering or even of uneasiness, sits quietly on its perch and is a good patient.

Rhody presented himself while we were attending to the hummer, but was shy of so many persons gathered together and his mouse was delayed. He again slept in No.1, about sunset, Julio handed him a second mouse on a pole, because the first one was small.

November 21st (Sunrise 6:54; sunset 4:55).

Fair, warm weather continuing; shortage of rain; about 2 inches since July 1st.

Both patients about the same in the morning.

Thrashers little in evidence.

Rhody came for his mouse and again slept in No.1.

November 22nd and 23rd.

A period of winds from the north; very dry, with relative humidities running as low as 15%. (That is: the air contained only 15% of the moisture it was capable of holding under the conditions of temperature and barometric pressure prevailing). Temperatures running from minima of 50° to maxima of 70° plus.

Thrashers little seen and almost unheard.

Rhody spending his morning on the west lot, coming here for his mouse, remaining home until bedtime and then going to No.1 for

the night--once after first spending a half hour or so in No.2 first.

"Patients"

I see nothing wrong with the owl.

The mud-hen is in a bad way and is not seen to eat.

The Anna's hummer is patient, tractable, feeds himself. His trouble seems to be with his right wing, which droops from an injury, probably. I held him in hand for a half hour, keeping his injured wing in position. A few minutes after being released he climbed up my shirt front and then, to my surprise, flew across the room, maintaining his elevation well.

November 24th. (Sunrise 6:58; sunset 4:53).

The north wind after subsiding again rose in the early morning.

At 7:30 A.M. the garden beneath my window was unusually full of birds: Jays, juncos, "all" the crowned sparrows, including the white-throat; song- and English sparrows; hermit thrushes (2); the two kinds of towhees; a thrasher at the feeding station; Anna hummers at the cuphea (C. llavea?); quail.

Low humidity induces bathing?

The hummer, thrushes and song sparrows bathed (52°). The quail and some others seemed eager for water. (Does the low humidity of the air act as a stimulus to bathing?).

Rhody came for his mouse about 11:30 A.M. and was given the largest one that could be found. He had no difficulty in mastering it. He now loafed on the bank above the fig for some hours and finally retired to No.1 again.

The thrashers were not heard during the day (while I was here)

November 25th

Thrasher song first heard in the garden at 7:40 A.M. It did not sound like Neo, but more like his mate, which it may have been.

Rhody was still in his house No.2 when I drove by at 9:40 A.M. (Clear, calm, 60°). No obvious meteorological reason for his indolence.

On passing again at 10:12, it was seen that he had moved outside the house and was sitting, all puffed out, a foot or two from it, in the direct (though spotted) sunlight. Apparently the big mouse of yesterday has kept him from feeling the pangs of hunger.

At 11:30 I found him outside the west fence pleased to see me: for he cried and rattled his bill softly, came over the fence and followed to the tool-house for his mouse.

He now went to the cage, where he discovered the screech owl and the mudhen (coot). His attitude toward them was that of a child viewing the animals in a menagerie for the first time: one of round-eyed curiosity and, it seemed, of disbelief that there could be such things in the well known cage. He stared first at one and then at the other, moving from place to place repeatedly to get a better view of each. He made no sound whatever, but raised and lowered his crest and stretched his neck out horizontally, twisting his head from side to side, climbed the wire for a closer look at the sleeping owl, glanced occasionally at the magpies; but his interest was centered upon the two new birds. He showed neither fear nor hostility--he was simply curious and, apparently, astonished. I can read nothing else into his behavior.

This lasted for perhaps ten minutes and he then came out to stand near me with the attitude of one who now paused to meditate

upon the significance of this strange phenomenon which had so inexplicably arisen!

He now wandered off to roost in the shrubbery on the bank by the fig tree for several hours: a location he favors at irregular intervals: sometimes every day for a week or more and then disregards for several weeks.

He went to house No.2 about 3:30 P.M. (70°); was still there at 4:30, but at 5 P.M. had left for No.1.

November 26th and 27th.

Summery weather continued.

Thrashers occasionally about the place; mostly silent but sometimes coming to me for worms. On one occasion it was N2 who came first; in a few minutes Neo came, talking.

Rhody was given a huge mouse on the 26th and on the 27th, although he came to the west fence on call from his post, did not want a mouse at all and would not fly over the fence althought he crouched repeatedly as if to make the effort. He slept in No.1 again and there Julio gave him a mouse about sunset, first offering a large one which he refused and then a smaller one which he accepted

November 28th. (Sunrise 7:03; sunset; 4:52).

The first cloudy day for some weeks; but mild.

Thrashers heard scripping frequently, but no song.

Rhody, at 11:30 A.M. came to the west fence on call, but hesitated long before coming over. He followed me part way and then disappeared. I finally located him outside the north fence where he had gone to get out of the southeast breeze(?). He had apparently forgotten that he was supposed to follow me to the tool house; but when I held up the red box (which he has not seen for months) his old associations (mice) awakened at once and he came to the top of the fence and I extended the box toward him in such a way that he could not see down into it, yet he promptly reached down into it and extracted the contained live mouse, which he gobbled as soon as it was dead "enough".

Being busy, I did not look him up again until 3:30, finding him in No.2 again . He decided (for the first time since the ant episode) to stay there for the night and, at 9:30 P.M. (Cloudy,60°) his continued presence there was verified.

The Patients.

The owl: "Still" apparently all right.

The coot: Much improved since I discovered that he likes Hamburger steak: the first food he has beeh seen to take. His case seems to be one of an injured wing interfering with his obtaining sustenance in competition.

The hummer: Seems to be in good shape except for injured right wing and left foot. Patient, tractable. He was bathed today by being placed in a shallow dish of warm water and washed with a camel's-hair brush. All of this manipulation he bore with good grace.

November 29th.

Rain during the night and clearing this forenoon.

At 9 A.M. (52°) Rhody was still in No.2, having been given

a mouse there by Julio an hour or so earlier.

At 10 A.M., still there.

At 11 A.M. " "

At 11:40 he was puffed out in the shade at the top of the bank above the fig tree looking very glum and discontented with the world. He brightened up, however, when I offered worms, but persisted in remaining in the shade at the top of the bank fully exposed to the S.E. breeze, although ten feet in front of him was bright sun and a perfectly calm place.

At 12 M. I gave him a small mouse there (the first one also having been small). A little later he came around to the north side of the house and stationed himself where he could be out of the wind and watch me doing some garden work a couple of yards away. He stayed with me for a half hour then drifted away.

He did not go to No.2 at all, but slept back in No.1 again.

No thrasher song was heard during the day, but there was frequent calling and scripping with some "conversation" in nearby trees in marginal territory.

November 30th.

Little change from yesterday.
Thrashers quiet, but about the place.
Rhody returned to sleep in No.1.

December 1st to 3rd, incl.

During this period there were rains nearly every night and one day on which heavy rain fell for several hours. On that day all the birds seen, except one spotted towhee, were externally very wet; this included the two thrashers, who looked like drowned rats but had good appetites, and Rhody, who persisted in sitting in the rain near house No.1, where he was given a mouse.

He slept in No.1 all three nights, had one to two small mice each day, coming up here for them every day except on the second. On the third he came to the door of the shop where I was working, looked in at me and rattled his bill softly to let me know he was on hand and in receptive mood.

On the 2nd. thrasher full song was heard for a few minutes about 8 A.M.

December 4th. (Sunrise 7:09; sunset 4:50).

The sun rose in a clear sky, 54°.

At 8 A.M. full thrasher song sounded in the garden and I went out at once to investigate. One bird was singing from the top of an acacia on the south bank and another one was sitting quietly in tha almond tree a few feet away.

I tossed a worm toward the acacia. Song ceased abruptly and Neo, for it was he, sailed down at once for it and came eagerly for more worms. He was very hungry and, for him, tame. His mate merely watched and talked a little, but did not join the feast.

The Anna hummer. This bird is much stronger, lively and apparently taking an interest in life. It now can fly about in the cage fairly well, but its right wing droops badly and its left foot is almost useless. It can not yet hover in the air and may never be able to do so and if not, it probably will not be able to take care of it itself if released.

Like all hummers, it is almost fearless in contact with human beings and yesterday, as I was inserting a bath dish into the cage, flew up to it and bathed while I was holding it.

A blossoming spray of Kuphea is kept in the cage in order to encourage it to attempt hovering flight.

Color pictures of hummer.

Colored motion pictures of this hummer were taken Nov.22nd, but they do not show well the exiquisite variation of color as seen at various angles of illumination, of the gorget and crown. These metallic hues appear tobe so actinically potent that over-exposure results when the stop is set for correct exposure of the rest of the bird. The result so far is that the metallic colors appear washed out. (Jan 20. Now think polarized light from surface is probably cause of this)

Rhody not having appeared either here or at his post on the west lot by 1 P.M., I went down into the thicket toward his house No.2 looking for him. He saw me first, for when first seen he was rapidly threading his way through the underbrush to join me. He followed to the tool-house without delay.

Rhody gobbles three small mice in quick succession.

I am giving him the young mice, about one-third grown, now in order to preserve adult breeding stock. Usually he has been content to eat but one of these--so I have thought--but, this time I placed two in front of him and he promptly gobbled them in quick succession, still kicking., and kept his place. So I handed him another and he ate that too. When offered a fourth, he looked at it "calculatingly" but turned away.

He again slept in No.1.

December 5th

Mild weather continued.

Rhody did not come up to the house today and was not seen at any of his accustomed haunts until about 3 P.M., when Julio gave him a mouse as he was about to retire for the day in house No.1.

December 6th. (Sunrise 7:10; sunset 4:50). With the approach of the Winter Solstice the times of sunrise and sunset are changing slowly.

A little thrasher full song during the forenoon. Neo, on invitation, appeared for worms.

Rhody was not seen during the forenoon. At 1:30 P.M. I went down into the brush of the west lot without seeing him, but he must have seen me for, on my way back, a glance to the rear revealed him using both wings and feet to overtake me. When we got to the tool-house I offered him two small mice;as he had shown such eagerness it seemed reasonable to assume that his appetite would be commensurate. However, he wanted only one, although he watched the second one for a minute or two as if having designs upon it. But in the end he ran off suddenly as if resolved to put temptation behind him definitely.

As I drove by his No.1 house at 2:45 he was already in it. Julio gave him another little mouse there an hour or so later.

The fact that he, at present, is often not coming up to the house for a mouse until I go down there and invite him, suggests that his food requirement is now so small that the hunger stimulus is not sufficiently powerful to cause him to seek food here on his own initiative; but when he sees me going through my leading-the-way-to-the tool-house "pattern" he "suddenly remembers" that he has not had a mouse. (A psychologist could, doubtless, phrase this observation with much greater precision).

December 7th and 8th.

Being otherwise engaged, I paid little attention to the birds here on these two days. However, Rhody appeared to occupy the west lot most of the time, leaving it only when invited up here for his mouse. He continued to use house No.~~2~~1 at night.
no.1

Little was seen of the thrashers, though Neo was given worms once.

The Coot. After having been apparently on the road to recovery, this bird suddenly became worse and died.

December 9th. (Sunrise 7:13; sunset 4:50).

Following a week of summery weather, this morning dawned dull and cloudy.

Thrasher song renewed. About 11;30 A.M., while working in the observatory installing apparatus to move the roof, and making plenty of noise, being shut off from the outside at the same time, I caught distant thrasher music. A thrasher was seen on the top of the Scamell deodar about 150 yards away. I went down to investigate. The bird was singing full song. Another was about ten feet below him in the same tree. Whenever the upper bird started its song the lower one joined in, stopping when the leader stopped. A third thrasher in full song could be heard to the south in Brokenwing's territory: probably that bird himself.

The bird in the deodar paid little attention to my proffers of food for some time, but eventually sailed down to accept. Neo, no doubt; the other his mate. The whole performance correlates with past observed behavior of paired thrashers.

I now went to look up Rhody, calling him from the west fence. He came out of the bushes, cried and trotted along after me to and into the tool-house for his mouse. (Noon). The smooth cement floor interferes with his traction. He now went to sit in his bush on the bank by the fig tree.

At 1:30 he was on the bank near the bush, staring fixedly up the slope at nothing I could see, back toward me and paying me not the slightest attention when I spoke to him. I got a small mouse and returned. He came for it very slowly, ate it and then turned his back on me again to gaze up the slope. I twitched the end of his tail; he merely took two slow steps forward and continued to look up the slope without having looked back at me. I could see no hawks about the place, nor anything else alarming. Four wrentits had been scolding him while in his bush and two were still near, but no longer concerned with him. I left him still engaged in the same performance.

Dr. Grinnell and his son came a little after three and I mentioned this incident as inexplicable as far as I could see at the time. The probable explanation, however, came as my visitors were driving west on the driveway. A Cooper hawk dashed across the road just behind their car, only about 4 or 5 feet behind it and not more than 6 feet above the road. This bird was perhaps lurking in the bushes at the time of Rhody's "trance" and he was aware of its presence. In any case, if this is the explanation, it parallels other earlier experiences.

Rhody again slept in No. 1.

December 10th.

The weather had recovered its sunny aspect this morning.

Early thrasher singing. At 6:50 A.M. fine, full thrasher song began and continued intermittently for about 20 minutes, perhaps longer. In other words: It began before sunrise and stopped at approximately sunrise.

Rhody discovers humming-bird patient. Rhody had not been seen during the forenoon, so, at 2 P.M., I went to the west fence and called. No results. But almost as soon as I returned to my construction job in the observatory, Rhody appeared in the upper garden and was inspecting the humming-bird patient at uncomfortably close quarters (about 2 feet from his cage temporarily in the garden). I went down quickly. Rhody seemed merely "academically" interested in the hummer, but I thought best to bribe him to come to the tool-house. Consequently he followed me to the door that opens into the court--an unaccustomed place for him to get "hand-outs" from me. Here he was pleased to take two small mice from hand and then sun himself in the location whence the hummer had just been removed to a safer place.

Reaction of hummer. Sooner or later Rhody always discovers my patients, as these notes bear witness. Hummer a little disturbed in R's presence.

He again slept in No.1

Screech-owl discharged. This bird seemed perfectly normal--also was seriously depleting Rhody's mouse larder--so was taken up into the hills to the east, house and all and placed in a pine tree (Lot 2031, Scarborough Road, Oakland). He was still asleep in the house when I put it in the tree. This is the fourth screech owl I have carried up into the hills and furnished with a house. All of them have slept during the journey. Alice's dormouse was an insomniac compared with these owls.

December 11th.

A strong north wind arose during the night and the day dawned crystal clear.

Quail kills herself in my sleeping quarters. A little before sunrise I heard a slight scratching sound near the radiator and it was seen that a female quail was huddled against the inlet valve.(While the radiator was not turned on, the pipe below the valve for about 6 inches in length would be hot at this time of the day. Later droppings showed that the bird had confined itself to this location for a considerable period). The bird took flight when I began to move about the room, circling about the ceiling and not approaching the windows (one of which was open--on the sunrise side) as if knowing or believing that the windows offered no means of egress. This would seem to indicate that it had had experience with windows and had learned to avoid them; but when it saw that the door leading to the dressing room and the bath room was now open--it had been closed all night--it dashed swiftly through it and a loud impact sounded from the latter room. The bird was on the floor quivering and was dead in a few seconds. This suggests that she had previously tried the bedroom windows, found them (supposedly) impossible to get through; had learned that they were impenetrable, but had not formed the same association with all windows; hence when a new window was seen for the first(?) time, dashed to her doom.

Reaction of hummer to dead quail. Later the quail was shown to the humming-bird in his cage. The reaction was essentially the same as toward Rhody yesterday: That is, the hummer began at once to fly about the cage, shifting from perch to perch (but not beating against the wires)

wires) uttering rapidly its chip (or tsip or tsick) cry, subsiding at once when the quail was taken away. It should be said that the hummer tolerates the approach of the human hand with indifference, or, when hungry, with interest.

Hummer illustrates same apparent preference for humanly offered food that other birds do.

On finishing the foregoing sentence I reached into the hummer's cage to take out the bath dish. He immediately flew to it, dipped his bill into it repeatedly, drank and made symbolic flutterings of his wings. (This again illustrates what I have so often noticed with other birds: black-headed grosbeaks, bullock orioles, green-backed goldfinches, California thrashers, road-runners, and so forth, accustomed to human association, viz: That food, drink or even other objects with all of which they are familiar and have had constantly before them and have --in the case of food and drink, been using regularly, when taken in the human hand, whether directly offered to them or not, immediately assume~~s~~ new attractions and seem to become more desirable).

I removed the dish and then the glass(upon which it had been placed to raise it up to the level of a perch). As soon as I picked up this empty glass the hummer flew to its rim and probed about it with liveliest interest. On restoring these to the cage the action was again repeated. In removing his food bottle and again replacing it, the action was repeated once more. When I introduce fresh Cuphea blossoms he reached for them eagerly although other blossoms were still in the cage. These notes contain other comments on this characteristic of other birds.

About 1:30 P.M. Rhody was discovered, curiously enough, in exactly the same spot where he had been looking at the hummer yesterday, although that bird was now in the house. These are the only times he has been seen there. He wanted mice of course and took two small ones from hand. Had he gone there to see the hummer, or had he"deduced"from yesterday's experience that I might be found in that neighborhood and mice would result? He slept in No.1.

December 12th.

A dull day with strong north wind, chilly, 56° maximum. Birds noticeably scarce during the forenoon; those seen seeking a lee. About 11:30, on returning from an absence, a Cooper hawk flew out of the garden carrying a bird in its talons. A half hour later Julio flushed this hawk near the west fence, where it was eating its quarry.

At 1 P.M., Rhody not having appeared, I went to the west fence and called without result. Finally I saw him frozen in an attitude that suggested that he was on his way to me when arrested by something ominous. I went over the fence and sat down by him. He was staring into the thicket about tree No.8 (Map, 1313A), but would turn his head to take worms from hand then resume his scrutiny. I now remembered the morning's hawk, thinking it might be playing some part in this attitude of R's. Before investigating I went to the house and got a gun, Rhody being afraid to follow. I also got two small mice. As I approached the fence a Cooper hawk flew out out of the trees near (and over) tree 8.. I went over the fence and sat down near Rhody, who had not moved from his original location and who was still looking into the thicket. When he saw the red mouse box, he immediately brightened, cried and came to extract one mouse and then resume his scrutiny of the brush. He apparently had not seen the hawk depart, or perhaps, being aware of that event, still considered the spot whence it came dangerous. In a minute or so he came for the second mouse. He now seemed at ease; was no longer tense and opened up his back to sun himself, accurately orienting himself, the sun now shining. I left him thus engaged and instructed Julio to go

down to Rhody's house No.1 before sunset and offer him another mouse, since the two given him were small and I thought another would be acceptable. About 5 o'clock J reported R as having been given a large mouse in his house, which he ate happily.

During these last two days the thrashers have been scarce, but Neo was in his special sanctum this afternoon and given worms. No songs were heard.

December 13th. (Sunrise 7:14; sunset 4:51. Note that sun is beginning to set later, but also rising later).

The cold north wind continues, skies clouded. Temp. at 9:15 48°.

About 7:15 (Julio) a hawk flew up from the ground by the sage patch. At 9:15 I went there. The spotted towhee immediately came for worms and, in a few seconds, Neo came through his passageway in the fence for his share: which proved to be all he could reach first. In a few more seconds a hermit thrush came forward for worms also.

Despite the weather and the hawk the place was "full" of birds at this time.

Neo in full song.
Rhody "butts in and gives me a start.

At 12 o'clock the wind had ceased and the skies began to clear. Neo now began full song from his special pine tree. (He had come for worms without invitation at 11 A.M.). I went toward the tree to look and listen, gazing up into it. Suddenly I was startled by a tremendous BOO! just in front of me and Rhody was running toward me but ten feet away. I had not seen him and I suppose this was his way of drawing attention to himself and his needs. He had come out from under the pine apparently and the act was singularly like that of a child who steps out quickly from hiding and makes a similar sound. Curiously, my first conscious reaction was one of annoyance, which subsided instantly and was replaced by a rush of affection for this joker, and a feeling of pride that he should have such confidence in my good will toward him. I now turned toward the "new" place where he has recently come for mice (The door of the tool house opening into the patio (court, upper garden). He had already anticipated, so it seemed, that move and partly preceeded me and partly kept even with me, until we arrived. I gave him a very large mouse (from a fresh supply of adults) which severely taxed his swallowing mechanism. Success was his however and he adjourned to the bank above the fig tree (and below the pine) to digest his meal. He again slept in No.1.

After an hour or so of practically dead calm the wind came back as strong as ever and from the same direction as before, north. I had expected it to come from the S.E. with rain. Mak. today 58°.

December 14th.

The north wind continued all day, except for another calm period of an hour or so about noon, after which it was renewed under clearing skies.

Neo was not seen during the day, but the place was again "full" of birds: a newcomer for this season being the Varied Thrush.

Rhody did not appear until Julio went down at 2:30 P.M. and I invited him up for a mouse. Rhody joined us at the "old" entrance

of the tool-house and gave two (because there were two of us!) moderate rattle-boos and had his mouse; again a large one whose hind quarters stuck for a time in the corners of R's mouth.

8 P.M. A light rain is falling: much needed after these drying winds.

December 15th to 17th, incl.

The rain, which amounted to only 0.03 inch, stopped before morning.

Thrasher song.

During this period of fair and mild weather thrasher song increased in frequency and was heard later in the day also. Neo and mate were often seen and one or both came for worms usually when called.

Rhody runs true to form.

Rhody continued to sleep in No. 1 and, except on one day, looked me up to get his mouse. On the off day he was already in bed at 2:30 P.M. and was given a mouse there. One could not have w wished for a finer day for the season of the year and certainly inclemency of weather had nothing to do with his early retirement.

December 18th. (Sunrise 7:19; sunset 4:52).

Rain during the night and a trace during the mild, warm day that followed.

Considerable thrasher song, beginning about 7 A.M. and being heard at intervals throughout the day.

Neo and mate home much and in receptive mood.

Rhody did not come up to the house, but came for his mouse to the west fence after crying on seeing me there. It was the sight of the red mouse-container that hurried him in my direction. He knows it so well that he will reach into it when I offer it to him without his having had opportunity to verify the presence in it of a mouse. He slept in No. 1.

Spotted towhee.

At the present time the bird I can count on most certainly to appear when I want it is the spotted towhee that seems to spend most of its time in the sage patch. When there it seldom fails to come toward me when it sees me, without being called, and always wants worms. Sometimes it gives its "Marie" call undoubtedly as response to my approach.

December 19th and 20th.

Thrashers sing- in rain.

Rain during the forenoon of the 19th. and there was thrasher song while it was raining. Song continued to increase in frequency during this period.

Rhody, on the wet days, remained in his bunk late, being seen there both days at about 10:30 A.M. as I passed by. He seems satisfied with one mouse per day. On the 20th he did not come up for it, but was given one in his house about 3:30 P.M.

December 21st. (Sunrise 7:21; sunset 4:54).

The sun rose in a clear sky to the accompaniment of thrasher song and there was frequent song here during the forenoon. Neo and mate were both present and, for a period of about 15 minutes, both sang beautifully. N2 has improved much, but is not the equal of Neo who, in turn, is not the equal of Brownie. When N2 first joined in Neo's song she seemed to use some of the phrases of that bird, but later struck out on an entirely different theme.

Neo had several distinct singing periods and each had a different basic theme; the tendency being, in any given period, to lay emphasis on one particular theme. Again it was observed, as I listened from about 10 feet away, that full song is ushered in by a number of soft introductory notes which can not be heard more than a few feet away and that there are, introduced into the song, similar soft "grace" notes not heard say 20 feet away or so. All this checks with observations on Brownie.

Rhody, at noon, came out of the brush on the west lot on call but would not come over the fence and follow for his mouse, prefering to warm his back in a sunny place. (Why did he come to my call?).

The Anna Hummer astonishes me by going into a blue-gorget phase for 10 minutes!

1:50 P.M. The humming-bird patient was taking a bath in his cage at 1:15: a long affair, as he was trying to wet himself all over,apparently, while sitting on a perch a little too high above his bath dish. I helped him by spraying a mist on his back with an atomizer. He cooperated fully and became "black". I glanced at him occasionally as he dried himself and was amazed to catch a glint of clear cerulean blue from his gorget: a color which does not appear in this bird normally. In certain lights and at certain angles the rosy crimson of gorget and crown often appears to be overlaid by a sort of halo or flourescence like the bloom on a mineral lubricating oil. This bloom seems almost to be detached from the feather itself and to be in space above it. (Not that I think it is, but that is the nearest I can come to describing the effect given).

I have no color charts to which I can refer, so the following colors are as I see them. Normally the colors appearing in the gorget, crown and small patches to the rear of the eye are, of course variable, depending upon angle at which the light strikes, is reflected, viewed, etc. I see crimson, rosy crimson, scarlet, magenta, gold, bronze, green running from emerald through ~~through~~ various mixtures with yellow to brilliant clear yellow; but never any blue other than the bloom referred to.

Now, as I watched, this "heavenly" blue occupied more and more of the area of gorget and head and was streaked with magenta or rosy crimson. It was overlaid by no other color. Some areas were entirely of this blue: a body color--not a bloom--darker than the bloom, and still metallic . I was so amazed at this totally unexpected phenomenon (apparition) that I called my Filipino boy, Julio, (who incidentally waits on this bird "by inches") and asked him what he saw. He said he saw blue and the regular colors and that the colors "go with each other". (He has some eye for color combinations. Once when I had planted a certain fuchsia by the front steps in order to get the effect of its bloom against the sandstone, without my telling him what I was doing he volunteered the opinion that the flower "goes with the house").

As the bird became dryer the blue was gradually replaced by the regular colors of the dry bird. In about 15 minutes no trace of the blue was left--I had put him in the direct sun close to the warm wall of the cloister.

Without attempting a complete analysis of the mechanism of this phenomenon--a too ambitious attempt to be made at the moment of its discovery, if indeed a complete explanation be possible, it is clear that the color change was due to the feathers' being wet.

The metallic colors of gorget and crown are structural colors overlying whatever colors, due to pigments, may be the body colors of the feathers themselves. These metallic colors are primarily due to interference effects caused by surface striation, scales, plates; i.e. minute physical

processes on barbs, barbules and so forth. These surfaces by reflection and diffraction cause inteference between the incident rays of white light and the rays reflected to the eye . That is the waves in the two sets of rays are out of phase and wherever a crest meets a trough (or a condensation meets a rarefaction) they destroy eachother, just as water waves do, wholly or in part. As a result where we see pure spectrum red, for example, that is the result of structural effects --- in contradistinction to pigment effects it means that all of the other colors which made up the white incident beam (neglecting absorption) have been destroyed and red alone has escaped to the eye.

I am purposely neglecting absorption, internal reflection, which of course have effect, and consider only the primary cause of the metallic colors: interference. Absorption, internal reflection and the pigments in the feathers themselves, it seems to me, can have
had in this instance, only slight effect; because if they had had the bird would have been black all over (as he was indeed at first).

As the bird dried and the film of moisture on its feathers became thinner, the structural features of the feathers which caused interference had superimposed upon them a film which possessed its own diffraction properties (like the soap bubble film). This film for a period of about 15 minutes, as stated, was, in places varying in excat location with time, of such a thickness as to cause interference of the (normally outstanding)red waves, thus destroying them and, either:

(1) Leaving the blue waves (which are normally seen mixed with the red, giving the cerise, magenta, rosy crimson--whatever you choose to call it) outstanding and unaffected, or:
(2) else added its own blue created for this one short period, or
(3) or both.

(All of this, of course, is speculation and only skims the surface of the vast complex of color).

A suggested experiment.

It will be observed that the color change was from one end of the visible spectrum to the opposite. It would be interesting to test out the foregoing crude, tentative theory by wetting the diffraction grating in a spectroscope and observing results.

Now I wonder what new species would have resulted if I had shown this bird to a competent "classificationist" without telling him that it was wet!

Rhody was not seen up here today, but kept himself subject to call on the west lot and was given a huge mouse.

December 22nd to 29th, incl.

This was a period of fair, sunny weather excepting for one forenoon. Temperatures running from minima of 45-50 to maxima of 56-68.

Watching for Rhody's "Spring" awakening.

Rhody continued to sleep in his No.1 house at night and showed a tendency to come up here earlier in the day. As a rule he was satisfied with one mouse but, on two days, preferred to go to the cage for meat.

I have been watching him rather closely for signs of "Spring" awakening of reproductive instinct, such as: beginning of song, clapping of wings together over his back, hrooing when given a mouse followed or not by ritual, attention to the mirror, increased interest in the magpies, and so forth; but as yet none of these symptoms has been observed with certainty.

Rhody's first song of the season due first week in January.

Based on the precedent of January 1937 and 1938, Rhody's first song of the year (and the first in many months) should be heard the first week in January 1939, at which time, presumably, his gonads should be far enough advanced in activity to be pouring sex hormones into his internal economy.

Thrasher song every day.

During this period Neo and his mate have been frequently contacted and given worms and Neo has sung every day. Song has usually been first heard about 7 A.M.--sometimes earlier.

December 30th. (Sunrise 7:25; sunset 4:59).

From the preceding paragraph it will be seen that thrasher song has been anticipating sunrise by a considerable margin.

Day dawned somewhat hazy, but mild, with fog at lower elevations.

By 10 o'clock I had given worms to:

Rhody, sitting on the west fence and taking them from hand,
Neo and mate in the orchard--Neo singing thereafter,
"Spots" the spotted towhee, who has become a persistent applicants
A song sparrow, for the first time,
A Nuttall sparrow--not the first time; probably the same individual each time,
A hermit thrush. Probably also a repeater.

December 31st (Sunrise remaning constant; sunset 5:00).

Yesterday and today Rhody had one mouse and slept in No.1.

Thrasher song ~~song~~continues to be heard at various times during the day, beginning about 7:10 A.M.

Weather remains fair and mild.

Birds to be seen here at this season.

In the mornings, especially, if there are no hawks about the place, birds are quite numerous and several species are represented. Without attempting a census, one may expect to see at almost any time: now

Rhody, the road-runner, of course;
Thrashers, Neo and mate;
Spotted towhees, not less than four;
Brown towhees, perhaps ten;
Wrentits, four;
Bushtits, many, in flocks;
Plain titmice, one or two;
Bewick wrens, one or two;
Hermit thrushes, several;
Quail, twenty to thirty, or more; 50 or more
White-throated sparrow, one;
Song sparrows, half a dozen;
English sparrows, one or two, relatively scarce;
Fox sparrows, several;
Nuttall sparrows, several; Golden crowned, several
Gambel : "
Ruby-crowned kinglets, several;
California jays, several;

Robins, a few;
Varied thrushes, occasional, but not yet common;
Flickers, several,
Nuttall wood-pecker, occasional;
Juncos, many;
Cooper hawks, too often;
Sharp-shinned hawks, occasional;
Red-tailed hawks, occasional; Sparrow hawks
Linnets, several;
Purple finches, several;
Green-backed goldfinches, several;
Willow gold finches, less often;
Pine siskins, occasional flocks;
Anna humming-birds, one or two, now doing power dive;
Blue-birds, occasionally flying overhead;
Audubon warbler, one

********************** 1939 **********************************

January 1st (Sunrise 7:25; sunset 5:01).

Fair weather continued throughout the day.

Thrasher song first heard at 7:10 A.M. and thereafter occasionally throughout the day. Neo and N2 given worms several times. The spotted towhee now competes actively with them for his share, but Neo manages to get most of those intended for N2 and "Spots".

Rhody has not sung yet.

Rhody did not wait tobe called for his mouse, but went to the cage for meat instead. He slept in No.1 and was "handed" a small mouse there at 5 P.M. Unless he sings by the third or fourth(?) of this month he will be off schedule.

Humming-bird patient.

Beginning yesterday the hummer has shown that he can hover at a flower and has several times repeated, though somewhat laboriously. It happened first when a spray of kuphea (sp.?) (Cuphea) prevented access to his food bottle from the perch, so he was forced to hover in the air to get at the contents.

Blue phase of Anna hummer's gorget.

This blue phase is observed every time the hummer bathes, provided he wets his gorget thoroughly. When it is saturated it is black as seen from all angles, but at a certain stage of dryness, the blue appears, gradually contracts in area and is replaced by the normal color completely in 15 minutes or so. It is necessary that there be a film of moisture on the feathers, as far as present experience goes. The blue is a brilliant metallic. I am not sure yet whether, in the blue state, any other color but black (calling black a color) can be seen when viewing the blue area at various angles.

Hawk Raid. A hawk killed a junco outside this window, 15 feet from me while I was at breakfast.

January 2nd

Fair morning, increasing cloudiness toward noon. (56°).

Thrashers present, with early song. Neo and mate came for worms about 10 A.M.

Rhody again demonstrates his accurate measure of his food requirement.

About 1:20 P.M. I called Rhody at the west fence. Shortly he ran toward me with a rattledboo and extravagant gestures, but came from the direction of the house. He followed rapidly to the tool house, where a large mouse was placed before him. He advanced at once to pick it up, but stopped short and stared at it. He repeated this action several times and at last killed it, but laid it down and "thought" about it. Evidently he considered the mouse too big for his needs and turned away. As soon, however, as I reentered the tool house he followed hopefully and accepted, killed and swallowed without hesitation the smaller mouse , thus again demonstrating for the nth. time his accurate measure of his food requirement at any given time.

Rhody already in bed at 2:10

2:30 P.M. Thinking that Rhody might go to bed early because of the threatening aspect of the skies, I went down to his house No.1, finding him already stowed away in it at 2:10 P.M.

At precisely 2:15 P.M. a few scattering raindrops began to fall. (Rhody a weather prophet?)

Neo joins us.

Thrasher talk was now heard in the bushes behind me and Neo stepped out to be rewarded with worms. This habit of his, of unexpectedly showing up in the vicinity of Rhody's house when I go down there,is increasing

Brokenbill. Still on the job at Sampson's.

Mr. Sampson told me this morning that Mrs. Sampson sees this bird regularly, that it shows some community of interest with Brokenwing, who is still there, and that it seems to have no particular difficulty in getting food. S was unable to state whether the bird's bill has grown out again, as he himself has not seen it recently.

January 3rd to 5th, incl.

During this period the storm gradually developed bringing rain the night of the third with strong sou'easters on the fourth and fifth with frequent heavy rains.

The thrashers were contacted each day and some song was heard while rain was actually falling.

Rhody showed an increasing tendency to come up here in the mornings and get meat at the cage and play with the magpies. He also seemed to be giving more attention to worldly affairs and did not hesitate to sit out in the rain provided that gave him an extended outlook. Although he did not sing, I got the impression that he was rapidly approaching the "state of mind" where he might break forth at any moment.

He continued to sleep in No.1 and the rain did not cause him to stay in his house even so late as he has been recently.

January 6th. (Sunrise 7:26; sunset 5:05).

The storm passed during the night (clear at 8 P.M.) and the day broke bright and clear (46° at 9 A.M.).

Thrasher song was heard about 7 A.M.

Rhody was already up here at 9 o'clock, in the orchard, preening in the sun and warming his back. He ignored me when I made road-runner sounds for him.

Well, 10:45, Rhody has at last broken out in his Spring song. I went down in the orchard to see him and, when he saw me, he ran toward me on the path, clappinh his wings together over his back (first

time in months and one of his breeding season gestures). He stopped about 8 feet in front of me facing me, lowered his head and sang his full song again. He moved still closer and sang. He now began to wander about the place singing at frequent intervals. I offered him a mouse, but he was far above such mundane affairs as eating.

He sang frequently until about noon, when other affairs demanded my attention.

One wonders whether, if the stormy weather had not intervened, he might not have sung on the third, fourth or fifth.

Dates of Rhody's first-heard songs of theyear.

I have looked up back notes to compare the dates of Rhody's initial song for each year, beginning in 1935. That is the first full song heard by me. The dates are:

1935.......January 31st. (He came here in April 1934 and was in song then).
1936........ " 15th.
1937........ " 3rd. (In some of the references to these dates, made without looking up the notes, I have reversed 1937 and 1938 unintentionally).
1938........ " 4th.
1939......... " 6th.

It is possible that he sang earlier in '35 and '36. I was not really listening for it very closely.

Anna Humming-bird patient is killed.

About 11 o'clock, Rhody was then singing, Julio came and told me that something had happened to the hummer. I found him wedged between the wires of his cage in the cloister, headless. Jays had been here; also a sparrow-hawk and also Rhody, though I do not know that any of them had been in the vicinity of the cloister. I had seen the hummer alive and well and had placed some "worm juice" in his bottle just after 10 o'clock. Rhody was accounted for during all but about 15 minutes of this period. He may have been guilty, but I do not think so. Perhaps "wishful thinking"; but Rhody would have swallowed the whole bird ordinarily and he could easily have drawn him out through the wires. I have seen both jays and sparrow-hawks eating birds on the place. I went to look up Rhody--he was still singing in the orchard--at once. There were no humming-bird feathers about him. The head could not be found. The body was cold and rigid.

Maybe the little fellow is better off, although there is a possibility that he might have been able to take care of himself if he had been liberated.

January 7th

Fine weather continues.

Neo gathers and places nesting material.

At 9:45 I was giving worms to Neo and N2 at the sage patch, when Neo suddenly lost interest in worms, began to gather nesting material, carried it through his passageway in the fence down into the "chaparral" on the bank and up into an acacia armata(Kangaroo thorn) within a few feet of his nest No.1 of last year. This is his first observed nesting reaction of the year. It seems to be a normal thrasher procedure at this season and does not mean that he intends to build now. Neo's mate (N2, Longtail) took advantage of his preoccupation to get her share of the worms. Spots, the towhee competed with her actively. Neo returned, looked at more nesting material, but decided in favor of worms.

Neo showed nesting reflex one day later in 1938.

(I have just looked over last year's notes for the first 8 days of January. On January 8th (See page 1590) I record Neo' first observed carrying of twigs and placing them! This also as I was giving him worms and in the presence of the newly acquired mate. Notes of that period show him tamer than he is now).

Does feeding act as trigger to nesting reflex?

It will be observed here that, on both occasions, the reflex was shown as I was feeding him worms. Observations on Brownie and Greenie recorded in these notes show them resuming work on nests on being fed, after they had ceased working for some time. There may be some significance in this.

Rhody resumes song and from high place.

I left at 10:15, returning at 3 P.M. Julio reported Rhody as singing "quite a lot" from the roof of the Scamell house. So, once again, he is seeking the high places with the revival of his reproductive urge.

He was given a mouse at noon time and slept in No.1.

Thrasher song: Volume as compared with last year.

As I looked over last year's notes of this season, as referred to above, it is strikingly evident that both frequency and volume of song last year far surpassed the first week of this year; but then Neo was actively competing for this territory with a rival (or rivals) and had numerous fights. Further he was acquiring a mate. All of this necessitated song. Now he has a mate--this same one--and seems i undisputed possession of this territory. I have heard nothing of the bird Inver for months.

January 8th and 9th.

Absent much of the time on these days; however, Rhody continued to sing during the forenoons and slept in No.1

Thrasher song was heard both days shortly after 7A.M. (or about 20 minutes before sunrise).

January 10th. (Sunrise 7:26; sunset 5:08).

Early song

Thrasher song heard at 7:05 A.M.

A "chummy" day for Rhody, but songless with fits of exhibitionism.

Rhody, at his post on the west lot at 8:30 A.M., paid no attention to my assorted sounds, but shortly after was on his bank by the fig tree--located by the wrentits. An Anna humming bird was also doing its power-dive and whistle over him, doubtless for his benefit, as no female hummer could be located.

Rhody stayed home until after 2 P.M. and did not sing at all. This was a "domestic" and chummy day for him, for he was pleased to spend some time with me at the sage patch eating worms from hand. This event attracted the thrashers and the female spotted towhee, so that I had the task of administering to all of their wants at the same time.

Neo "nests" again.

Again Neo was stimulated to nesting activity in the kangaroo thorn on the bank.

Rhody pulled off two of his circuses: one for the quail which involved running through their flock with display and rattle-booes and one for a towhee in an apple tree. These performances do not seem to be taken as serious affairs by the birds thus honored.

White-throated Sparrow.

This bird, still here, seen by Dr. Grinnell .

January 11th to 14th, incl.

During this period of summerlike weather, temperatures running from minima in the low forties and maxima in the high sixties, events (or lack of them) worth recording, were:

Rhody

No song during last two days. Sleeping every night in No.1.
No ritual when given a mouse.
Increasing tendency to wander abroad suspected.
Getting up at "reasonable" hours.
Going to bed later (as observed on 14th after a day of almost total absence, not even going to cage for meat when not given a mouse at noonday).
Continued interest, though mild, in magpies.
No display at mirror; no observed nesting reactions.

Anna hummer does its power-dive-and-whistle for Rhody's benefit.

On the 13th, A.M., Rhody, at his post on the west lot, in plain view, in the open, attracted the attention of an Anna's humming-bird who (not the first time) used him as the objective of his "climb-dive-whistle-climb" performance. Rhody crouched each time as the hummer reached the low point of his arc about two feet over R's back. There can be no doubt of R's being the objective, since no other bird of any kind was near.

Thrashers. Territorial song.

Thrasher song could be heard at almost any time during daylight hours and began as early as 6:50 A.M. There was a notable increase in frequency and duration, which seemed to be inspired (on the part of Neo) by a rival bird (Inver?) in Inver's territory to the north and N.E.. Song could also be heard from the south (Brokenwing territory at Sampson's) but Neo concerned himself principally to song directed toward the north and east from singing points in the noman's land outside this property, including the "echo territory".

Thrasher unco-ordinated nesting activity.

Usually, when Neo came home, his mate was with him; both coming to me for worms and Neo occasionally occupying himself with picking up (and eventually dropping) twigs. There was also more song in Dimond canyon and Neo appears to have giventhat attention as well, singing from the Robinson place east of here.

Hermdt thrush tamer.

"The" hermit thrush--there are several here, but only one seems to recognize me as source of food--now associates me so strongly with delectable food that he apparently watches for me. However that may be, he seldom fails to come out of the bushes and place himself in front of me whenever I go down into the orchard and wait patiently for me to toss worms to him. He and the spotted towhee compete actively. The towhee overawes him.

Audubon Warbler.

For several weeks there has been a single audubon warbler almost constantly in a certain small pine tree on the south bank a few feet from the fig tree. He feeds on the scale (or the honey-dew) found near the terminal tufts of needles and drives all other small birds away from the tree, sometimes pursuing them for several yards, returning to his tree. That there is honey-dew present is evidenced by the bees, yellow-jackets and an occasional hummer visiting the tree and feeding. (Too high up for me to verify without getting a ladder).

January 15th. (Sunrise 7:24; sunset 7:13).

High fog this morning. lifting about 11 A.M.

At 10:15 I went down to look for Rhody in his house No.1, thinking that, as he was thought to have made a considerable journey

abroad yesterday, he might be still in bed--and so he was--but whether due to fatigue or fog--nobody knows. He was not at all interested in my presence and was not seen even to give a fleeting glance at me. Thus did he show gratitude to me for the several thousand mice I have given him! (Without making a careful estimate: probably over 2000).

The sun did not last long, as the sky became cloudy and remained so for the rest of the day. I went down to see if this had caused Rhody to stay in his house (at 1:45 P.M.). He was there, but lying on top of it. This time he condescended to look at me, but offered no greeting at all and would not come down; so I returned to the house and got a mouse, carrying it in a red box which I kept concealed, as I wished to see if Rhody would come down on seeing the box, since he associates it with mice. In other words: I wanted to see if he would accept the box as a more specific guarantee of a mouse than my mere presence (with verbal assurances). The intention was to show it to him only if he failed to come down. However, it did not work out that way; for, when I emerged from the brush about 10 feet from his tree, he sailed down at once--box or no box! The mouse was quickly eaten without display of any kind.

As far as known, Rhody has not sung for several days; his singing, like his nest-building, seems also to have "harmonics" superimposed on the "fundamental wave", i.e.: there are days without song followed by days with song.

January 16th.

Thrasher song at intervals throughout the day--fair and mild.

Birds scarce during the forenoon on account of the presence of a hawk, which made several raids upon the quail. This was a large female Cooper's hawk and once, when it was right in the bushes with the quail on the bank by the fig tree I took a shot at it with the 22 rifle using a BB cap. I heard the bullet strike it and the bird fell part way to the ground, recovered and flew off.

Rhody was apparently aware of the presence of this bird, as he would not come home. At about 1:30 I called him from the west fence. He came readily enough and over the fence, but halted before reaching the trees and rattlebooed stubbornly. Not a step further would he come; so I compromised, went and got him a mouse. He rattlebooed as I approached him and took the mouse from hand. No display. No song heard during the day from him. He slept in No. 1.

January 17th.

Thrashers still singing--some of it competitive.

White-throated sparrow.

Dr.Grinnell and Mr. John Baker (Executive Director of the National Association of Audubon Societies, N.Y.) were here about 10:15 A.M. Rhody was on the west lot and the White-throated Sparrow obligingly made himself at home on the oval lawn, near which we sat.

Rhody sings.

I learned from Mrs Scamell later in the day that Rhody had been singing "beautifully" but a few minutes before Mr. Baker and I went down to see him! As luck would have it, the thrashers also observed a period of silence while my visitors were here.
The Anna hummer was also buzzing around in Rhody's immediate vicinity, but he too failed me, by failure to pay his respects to that bird by doing his power dives.

January 18th.

Scattering thrasher song continued.

Rhody "on tour" goes to bed late.

This was one of Rhody's days for wandering, apparently, as he was not seen at all on the west lot or here, until Julio made his third trip to R's house No.1(after 5 P.M.) and waited there. Rhody appeared at last, about 5:20 P.M., and accepted a huge mouse before retiring.

January 19th. (Sunrise 7:23; sunset 5:18).

A dull morning. Neo was first heard singing at 7:15 from his last year's nesting area. At 8:30 he was still singing there and I went to see him. He came quickly for worms, followed in a few moments by the hermit thrush and the spotted towhee.

He soon retired to the shrubbery on the fence to continue fragmentary song, appearing to listen intently between songs. It looked as if he wanted to "start something", but no other thrashers could be heard.

He returned to me for more worms and was more than usually eager for them. He had the thrush and the towhee as active competitors and. later, the Nuttall sparrow. Again he retired to the fence to sing and listen.

A thrasher singing "convention"

11 A.M. I have just returned from the area adjoining my north east corner, where there has been a concentration of thrashers with much song. About 9:30 Neo went to the top of a tall pine about 50 yards north east of my north east corner and continued his song. Another song could be heard in that general area, so I went up there. Neo kept his place for more than an hour and sang almost continuously. About 75 yards from him, on top of the Nichols' house and closer to Neo's home territory than Neo himself, was another thrasher in full song: with a richer song than Neo's. He also sang continuously. Neither bird faced toward the other, but both faced south. About 9:45, in the oaks and pines between the two birds, a new song began. It was of a still different character and unlike that of any other thrasher I have heard. In fact I had to see it before being sure that it was a thrasher. It now came out and went up into a pine tree nearer Neo. Its song was deeper than those of the other two with timbre more like that of the meadow-lark, but not resembling it in any other respect. For quality of tone it was the best of the three. For about a half hour this concert was continuoes and almost nothing else could be heard but thrasher song. A magnificent performance.

Curiously,there was no obvious evidence that any one of the birds was aware of, or concerned in, the presence of the others, but of course, all were. All sang at once: there was absence of antiphony. A fourth thrasher now was seen, sitting quietly just below Neo: not over 2 feet from him. Neo continued his song. Presumably this was his mate. But, in a few minutes, this bird flew over and joined the bird in the middle tree. No action was seen between them and No.3 continued his song.

I stood on the sidewalk in front of the Carter house. A party of ladies now arrived in an auto and at once began to comment enthusiastically on singing of the "mocking-birds". As I was, by accident, practically one of the group--and looking like a tramp, incidentally--I could not forbear introducing myself as the next-door neighbor and set them aright on the bird situation, as far as I could understand it myself! The introduced themselves as "practically cousins" of Dr. Ritter's. The mistress of the house--it is now no

longer Mr. Carter's, the new occupants having bought it, now came out and I was introduced as one who "studied birs together" with Dr. Ritter. (I hope he will not mind if he hears it). The name escapes me at the moment, but this young and very attractive lady, begged to be told all about the local birds so that she could instruct the Girl Scouts under (it seems) her jurisdiction.(Some time in the futur

While this was going on I lost track of thrasher activities, but did see that Neo had joined the two in the pine and that there seemed to be no conflict amongst them. They were now virtually over our heads. The ladies wdre late for some engagement and the birds appeared to have dispersed when I was able to direct my attention to them again.

As compared with what I have called the "Conventions" of earlier months this gathering called forth song of higher average quality: less confused, with less "talk".

January 20th.

A dull day with considerable thrasher song in marginal territory: three birds being concerned. I brought the Grinnell's over to hear this fine example of varied thrasher song of high quality, but when we got here, there was almost complete silence, and so it remained until I returned from having taken the G's home again!

For the last two days Rhody has spent a considerable portion of his afternoons in an acacia on the bank bounding the south side of the "Clearing", opposite the Scamell house, and has not been heard to sing. At midday he has come up for meat at the cage and both days slept in No.1.

January 21st. (Sunrise 7:22; sunset 5:20).

A dull, chilly morning up to about 10:30, when it cleared and became warm.

There was thrasher song in the early morning and, at 9:30 I went to the sage patch where I entertained the two thrashers, the hermit thrush, the spotted towhee and a golden crowned sparrow that, on this occasion at least, seems to have supplanted the Nuttall.

As showing the individuality of birds, it is interesting to note that only certain individuals of the species mentioned come to me for worms and then, with the exception of the thrashers, only one bird of each kind.

Neo again showed his nesting reflex by picking up and dropping twigs.

By getting him on one side of me and his mate on the other, I was able to stuff the latter pretty well--a difficult feat with Neo on hand and the thrush, and the towhee and the golden-crown watching everymove closely just out of arm's reach. My success with N2 brought an unexpected reward, for when she was pretty well satisfied, she held one of the worms in her bill as if undecided what to do with it, then ran into the sage where Neo was waiting patiently for his turn and, although I was unable to see either bird (only about 6 feet away) there followed the rapidly uttered cluckings made by the thrasher when offering food to a youngster that does not open up promptly. This is the first action of this sort witnessed on the part of N2.

Rhody was now found on the west lot and given worms. About 10:30 he began to sing and wanted nothing from me. About noon I went down to him again and he renewed song. I sat down about 7

from him to listen. He continued to sing and, at times that high, nasal overtone "broke through",as been elsewhere recoded in these notes.

I had a mouse with me, but he did not want it until it escaped and ran under a bush. Then he pursued it, grabbed it while I was trying to do the same thing and ate it promptly without ritual.

A little earlier than this, while probing one of his feet in typical road-runner fashion, he had picked up several twigs at his feet, only to drop them. This may be his first-seen nesting reflex of the season or, on the otherhand, may have been a mere accident.

He also while I was with him, performed once his odd over-the-back wing-slapping act. I was unable to determine whether he slaps his back or claps the backs of his wings together. I have never been certain on this point. (61°).

At 4 P.M. (sunny, warm, calm) it was found that he had already gone to bed in his house No.1.

January 22nd.

Another dull, chilly morning (46° at 10 A.M., breeze from S.E.). Thrashers singing in the distance.

Rhody, at this time, was found still in bed, wanting nothing.

There were few birds to be seen, suggesting the presence of a hawk. though none was seen. However, at the sage patch, a cock quail was in frozen attitude and did not move when I approached to 8 feet.

"Spots", the female spotted towhee,was there and had no reservations as to hawks and came out for worms promptly.

I moved on toward the orchard. "The" golden-crowned sparrow was in a rosebush on the fence looking at me meaningly. A gesture of the empty hand brought him for worms. Again I moved on. "Nutty", the Nuttall sparrow was also in the tangle on the fence 20 feet or so from the other bird. He immediately flew to my feet for attention I said: "Where's the thrush?" Almost instantly "the" hermit thrush came through the fence for his worms. Curiously, not one of these birds had interfered with my feeding each individually, contrary to the usual experience when all are present.

Of these four birds certain differences in their attitudes toward me stand out:

Spots is the most persistent customer and "tagger-along", but not the boldest in approaching me, althought the first to discover possibilities in me. He can almost always be found in the sage patch and sometimes calls on seeing me approach. He seldom comes closer than about 3 feet and usually retreats a short distance with each worm. Three or more other towhees of his kind often see him getting food from me, but have never approached me.

The Nuttall sparrow is the boldest, as measured by nearness of approach and confidence in me when near. However, he applies to me for food far less often than the thrush and Spots. When he does come he will plant himself right at my feet, take and eat each worm there without retreating until satisfied. He seems perfectly without fear, while there.

The thrush ranks next in boldness, measured by the same standard. He comes fearlessly from a considerable distance and will station himself about three feet from me on the ground, eat each worm

where he stands and wait indefinitely for the next one. He is the most patient and the hardest to "fill up", and the most immovable of the lot and stands there like a graven image. He flashes into action most quickly and while he yields most often to the others, he can, if not too much overawed by one of them on the same errand, beat any of them "to it". He is the most agile.

The golden-crown is an immature; a recruit, without any solicitation on my part, of the last 4 or 5 days. (In fact all of them have made the first advances). In behavior he is much like Nutty.

White-crowned Sparrow.

This bird, now at the feeding station just outside the window has been seen nearly every day since first seen this year. Only one is seen at a time: probably the same individual.

Thrasher concert.

10:55, (50'). Sun coming out. The thrasher concert is now in full swing in neutral territory: the same area where it was on the 19th. Several birds engaged.

I now went down to Mr. Sampson's. Thrashers were not singing there at the time and we saw none, but S said they had been at it earlier.

On returning, song still in progress, but nearer the house.

Very fine concert in garden.

By noon the birds had concentrated inside the property lines: some on the roof, Neo near the oval lawn, soon joined by his mate. There were at least four birds, but as visitors were present, no accurate census could be taken. (Julio said:"As thick as sparrows")

Up until about 3 P.M. there was a succession of these waves of song here, each lasting for about a half an hour, Neo being in the midst of it all. There were no signs whatever of strife and, for the most part, each bird occupied its singing postapart from the others. It was very much like the "Convention" season but with bette song, no posturing, less confusion and almost no "talk".

Rhody consents to show himself to 5 visitors.

Rhody had not shown himself on the west lot up to 2 P.M. and was not discoverable until I called him at the "Clearing" about 2:30. He then popped up to the top of the fence. Mr. McCullough and friends had been here shortly before and were disappointed in not seeing him, so I called them up on the 'phone . I now returned to Rhody, meeting him part way up here, and followed me back to about 15 feet from the party of 5, standing quietly watching. Here I gave him his mouse, much to the delight of my visitors. He quickly ran away with the mouse, but stopped in the orchard.below where all could see him. It was interesting to note that the party, some of whom had never seen a road-runner at all and some never at close range, were united in their admiration of his beauty.

January 23rd.

Weather continues sunny, warm and calm. Thrasher song at intervals throughout the morning (Now 11:50). Rhody on west lot.

At 10 A.M. Rhody responded at once with full song when I coo-cooed for him 50 yards from him.

The thrush and the spotted towhee, for the first time, discovered that I can be found at places other than the orchard below, and while I was listening to Neo singing in his special pine, both of these birds appeared silently at my feet for worms.
The thrush followed me to the oval lawn area. Here he was discovered by that other hermit thrush who claims a certain cotoneaster bush as his feeding territory and was driven away with blows. A few minutes later he recovered from the surprise and drove off his late

attacker from the road in front of me, and waited for more worms from me. It thus appears that these birds resent intrusion of others of their species on their chosen feeding areas in their winter quarters. At the same time it is observed here that two or more may be often seen here close together without friction, although on such occasions it has not been certain that any of them claimed the territory occupied. This time the bird in the bush was feeding there when the other came to me and made his attack when the two were about 15 feet apart.

Rhody and Anna Humming-bird.

The hummer was again seen diving down at Rhody and giving his explosive whistle at the end. This is now getting to be a regular performance of his.

January 24th.

Warm enough for R's spread-eagle pose.

Mild and sunny weather continues(Max.63°). At this temperatu (in the court) Rhody, on the bank of the entrance driveway, saw fit to"do"his "spread-eagle" sun-fit".

He sang a little today and spent much of the time up here, coming for meat about 1 P.M. J gave him a mouse later after he had retired between 4 and 4:30.

About 8:30 A.M. I went to the orchard. First came the thrush then the spotted towhee;then the golden-crowned sparrow; then Neo and last N2. All wanted worms.

Attitudes of my birds toward meat.

Later on another visit to the orchard, all came quickly. The same individuals. I tried them each on Hamburger steak. Each would run to pick it up at first, but Neo was the only one who would actually take it in his bill. Neo ate it all. Finally none of the others would even react to my tossing motions and they gradually drifted away.

January 25th.

Same kind of weather this morning. (Now 11:15 and a great thrasher concert in progress in the garden--see later). First song, 6:45 A.M.

Certain individual birds reverse their attitudes re meat.

I went into the orchard at 9 A.M. **In less than** one minute the **thrush** came and ate meat tossed to him, reversing his yesterdays attitude. In a minute or so more the spotted towhee also came and ate meat. Same comment.
Neo came next and, of course, took meat. Then came N2, but she would not touch it at all.
The two Zonotrichias were not seen.

At 10;30 Rhody was at his post on the west lot, not interested in invitations. Soon he saw something in the bushes and proceeded thence to investigate.

Thrashers gather again.

Thrasher song could now be heard from the vicinity of the glade and Neo's intimate domain. I went there. Three birds were present--two of them singing. Two more were singing in the pines by the north wall of the house.

N2 (Longtail) is definitely established as a female singer of quality.

One of the singers was occupying the highest stub of the old oak and in almost continuous song. It did not sound like Neo, although the song was good. Thirty feet from it in the oak at the side of the road by the sage patch was the best singer of the lot. It was Neo. (He was not the best singer the other day).
I now thought the bird in the old oak was N2, although she

never been heard to sing so long and continuously before. Although I could not see Neo, I recognized his song (principally by the "victoree" phrase). Naturally, if the bird in the old oak were N2, I wanted to re-establish the fact of her being a first class singer, and the way to do it was to get her to come to me for worms with or without Neo. When she began to show evidences of wanting to move elsewhere I tossed a worm and she responded promptly. It was N2; but I wanted to see her with Neo in order to compare them. Neo kept on singing while N2 ate worms for several minutes more, but finally he came down, "dished" N2 out of a worm and at once the two were on the established Neo-N2 basis.

Remarks re female singers.

Of course, N2 has been heard to sing before; but never like this. We know that Greenie and Nova were singers--Greenie by far the better. Now comes N2; so that of the three definitely identified females that have been resident and mated at this place, all ~~of~~ have proven to be singers. Greenie had tone quality and "words" like Brownie her mate. Neo was inferior to both by a considerable margin, and shriller. N2 (Longtail) is somewhat higher pitched and less flowing than Neo and with inferior tone quality; but her song is good and well sustained and, after years of close attention to the songs of California thrashers, I would not have been able to say that the bird on the old oak was a female (In fact was not at first, as judged by song alone).

In considering this concert and, in retrospect, (without referring to notes of the time) the actual physical combat of Neo and N2 with an intruder last year,* it appears that the female takes part in announcing territory occupied--if this was a territorial affair.

No conflict.

It should be stated that there was no sing whatever of conflict amongst these five birds: each singer remained indefinitely at his post and only one, a silent bird, appeared in the heart of Neo's nesting area and then departed quietly without attention from the two occupants.

N2 resumes song.

After I had fed N and N2, the former went to another tree to sing and N2 returned to the top of the old oak--the most conspicuous singing point here, and resumed song as I came in to make this record. This was "not like" her at all.

Thrasher song continued here until about 12:30 and then the foreign birds seemed to disperse. Neo and mate remained, but song could be heard off to the south west. For a short time, about 1:30, Neo having sung occasionally in the meantime, there was a short renewal of the concert here, but in much less volume.

Now, 2:20, it is quiet (65°). Neo and mate are loafing in their nesting area and talking.

By 12:30 Rhody had eaten the meat in the cage and was loafing in the partial shade on the entrance driveway bank, where he now is. I placed a small mouse 2 feet from him without interesting him; but when the mouse made the mistake of running to the motionless bird (for protection?) his doom was sealed.

January 26th.

A dull, chilly morning. Thrashers singing early.

Thrasher gathering. A fine one for song.

About 10:30 Neo and mate, and my other customers were with me in the orchard, being tested on Hamburger again. (See later). Thrashers could be heard singing in the

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* Notes of Jan. 6th, 1938.

of the house (North). N2 went up into the pine behind me and began a long-sustained full song of fine quality.

Neo went up into the old oak and occupied the highest stub as his singing post. Each remained in song and location for a half hour or so before shifting to points nearer the other singers.

Two other thrashers were quickly located in the pines on the north line--both singers. Neo went to the weather vane of the observatory and sang there. He and N2 joined the other two in the pine close to the N. wall of the house. There was climbing back and forth running on the roof, singing and, after a time confused sounds like thoseof the regular convention season, but no evidences of strife. Occasionally a bird would come down to dig and disregard the others.

Two more thrashers were next located in the pine near the cage--one a good singer. The other soon came down to dig. There were now 6 accounted for, all here at once.

When they finally dispersed Neo and N2 remained. There was no evidence that the others had been driven away. They seemed to leave one at a time voluntarily.

Just before this, as indicated, I was testing the same individual birds as on the 24th, on Hamburger, with curious results.

The Nuttall sparrow was again absent. All of the birds ate the meat except N2, who would only look at it and run forward only, when a worm was tossed to her. For over a year now she has consistently refused meat, whereas Neo accepted it from the first.

I wonder why the thrush, the spotted toehee and the golden crown changed their minds so suddenly.

Rhody came up for his meat about noon. He is now doing this regularly if he is not given a mouse earlier. He does not like this kind of weather, puffs out his feathers and looks glum, sitting quietly in one spot and not seeming to care whether it is in the dense shade or in some other place where he can get such light as there is.

On such a day one would expect him to go to bed early, but Julio found him about 5 o'clock on the way to his house and there gave him a mouse; so he retired after 5 o'clock.

January 27th.

A little rain during the night and the forenoon (Now 11 A.M.)

This did not keep the thrashers from singing, with a tendency for outsiders to collect and sing on the edge of Neo's territory.

Rhody as usual.

January 28th

A rainy day, but with thrasher song.
(Spent most of this day working on MS, for the Condor Mg.,

of observations, last year, on Allen Hummingbird here).

"Adventures of Chico".
(Road-runner film).

Took time out to see the film "The Adventures of Chico", the basic theme of which is the friendship between a young Mexican boy and a Paisano (Road-runner). If one disregards the false interpretation of the actions of some of the birds, which is necessary to make a sentimental"story", and the ridiculous"sound effect" which is supposed to represent the utterances of the bird in the presence of the boy, we have a truly splendid presentation, though incomplete, of road-runner activities.

The scenes at the nest, in which are seen the parent bird and 4 or 5 "paisanitos"--fed by the boy when one of the adults is supposedly killed by a coyote, are extremely good; as is also the one where the last youngster to leave the nest finds the boy, flutters around him with spread wings, climbs all over him and finally poses beside him in an attitude of adoration (really the"semi-spread-eagle sunfit"). There is a magnificent fight between a road-runner and a large rattle-snake of several minutes duration and seen at close quarters. (The bird is supposed to be protecting the sleeping boy).

The amazing agility and courage of the bird stand out. The fight is absolutely genuine(as far as it is not interfered with by human agency). It ends with the road-runner's getting a hold on the snake's head and slapping him on the ground in true road-runner fashion. Just before this, since the snake seems to weaken too suddenly, he has probably been "discouraged" off the scene by human friends of the bird. The boy, who has been saddened by the thought that the young birds have not appreciated the care he has bestowed upon them, now awakens, sees the final disposition of the snake by the bird and, as the bird now goes to him with evidences of affection is convinced that the Paisano (fellow countryman) is a true friend. (Incidentally, this latter bird appears not to be the one that fought the snake; but it is a nice little story).

January 29th

Rain at intervals. Rhody, visited several times at his No.1 house (last time by me at 1:30 P.M.) does not seem to have left the house all day. He was fed there later by Julio.

Thrashers continued to sing, mostly in border territory.

January 30th.

Neo--nesting reflex.

Sunny forenoon, cloudy afternoon. Thrashers singing in the A.M.; fist song about 7 o'clock. Neo repeated twig-carrying.

Rhody, at 11, on west lot, sings on being urged, but wants nothing. However, he goes to cage to get meat about 1 P.M. He is given a mouse in his house before sunset by J.(About 5 P.M.).

January 31st. (Sunrise 7:16; sunset 5:31).

A dull, chilly morning, but plenty of thrasher song.

At 11 A.M. I went down into the orchard (42°). Almost immediately came:

The two thrashers, the hermit thrush, the spotted towhee, the golden-crowned sparrow. Worms were tossed to each individual. A minute or two later the Nuttall sparrow came and stationed himself at my feet, paying no attention to the competition of the other birds farther away, but waiting patiently for his share. He is the boldest of all and has, a few times, essayed to fly to my hand; but lacks the courage to come all the way.

February 1st

The coldest morning of the winter, 35° minimum; but much colder at lower levels and further inland, both north and south.
The day was brilliant, but warm in the sun.

Rhody was induced to sing in the forenoon, came up for his meat and was much at home.

Rhody's first observed positive nesting reflex of the season.

While sunning himself in the glade he picked up a large twig, considered taking it up into a tree and finally abandoned it. While, as the notes show, he has done this before this season, this was the most positive indication of desire to build. On the other hand, it tends to support the inferences drawn from the earlier actions that these were precursors of more active awakening of his reproductive urge.

He was given a mouse after he had gone to bed in No. 1. No.2 seems to cut no figure at present in his daily life.

Thrashers frequently sang about the premises , Neo and mate spending much time here, especially in their last years nesting area.

February 2nd.

Thrashers sing in rain.

A day of frequent heavy rains. Thrashers heard to sing in the rain.

Rhody was visited in his house several times during the and given a mouse there twice. The evidence is that he did not come down at all.

February 3rd.

Sun, rain and cloud. Rhody in his house most of the day., where Was twice given a mouse.

Thrasher song first hear about 6:50 A.M. and thereafter ofte during the day. "Foreign" bird were occasionally heard nearby.

February 4th.

A brilliant morning. First thrasher song heard at 6:45 A.M. (Getting earlier?). Almost continuous up to 10:30.

About 10 A.M., Rhody could not be located on the west lot, but a few minutes later, he was in full song from the top of the old oak, then continued to wander all about the place in apparent search for a mate. He seemed to listen to all sounds and often ran toward them, singing many times. In one of his more sedentary states I sat about 5 feet from him and watched. It was easy to induce him to sing. (The thrush came and joined us, looking for "hand-outs." Rhody could not be tempted to interrupt his search and song by offerings of mice and, by 11:30 had apparently reconciled himself to defeat, so began systematically oiling his plumage, nibbling the nipple of his preen gland, beginning with the tip of his bill and extending the operation of oil collecting all the way to the angle of his mouth, then rubbing his cheeks and ear-coverts on the gland, following at once with dabs at various points all over his body.

His tail is so long that he can not take hold of it easily. He has to bend it quickly to one side and make a sudden snatch at it before it bends back again out of his reach. When he does catch one of the rectrices, usually an outside one, he draws it between his mandibles, but it usually gets away from him before he reaches the outer end.

While watching him and following him about he was often seen to do his wing-clapping act and I still suspect that the slapping is done above his back. (11:35. He has renewed song and I go out to watch him). I found him on the west lot, where it is warm and sunny in the open. He is still singing at 12:30 P.M.

Mrs. Scamell says that he was tapping on her dining-room window " a few days ago". Another sign of his spring awakening.

Rhody wanted nothing from me, although he did condescend to take a few steps toward me (from 15 feet away) perform his curious wing-slap and say wooh, woo.

Lizards out.

It may be that he has already obtained food for himself. On bright days throughout the winter, lizards are often seen here, sunning themselves or, as a few moments ago, running through the sage.

While I watched Rhody he was twice the subject of an Anna hummin bird's attentions.

Rhody next displays, for the first time in months, his carrying-the-mouse-with-ritual pattern.

1:30 P.M. Rhody has just progressed one more stage in his reproductive cycle. At 1:15 he was found near the cage sunning his back. He had not eaten his meat there and did not seem hungry, as he reacted little when I spoke to him. However he followed to the tool house, standing in the doorway working on one of his feet--a typical road-runner action, seen almost any day. As feet seemed more important to him than food, I doubted whether or not he would accept the large mouse I now offered him. He was doubtful about it too, and merely stared at it after one brief glance and a step toward it. I now got a smaller mouse; but he had overcome his indecision so far as to kill the first one.

He is undecided.

It now became clear that his immediate, future course had not been decided upon as yet, for he laid the mouse down and "considered"the matter further. He picked it up again and appeared to wait for an inspiration. When it came it was not very decisive of his next step, for he still hesitated, apparently whether he would eat it reject it or take some other course. The "other" course I had in min was the beginning of his seasonal use of the mouse as a love offering with ritual and presentation at strategic points. A slight bow, a almost inaudible hroo with a slight wag of the tail, indicated that that course was under contemplation. A further wait and the decision was made, for, at first in rudimentary fashion and then with almost full fervor, the well know pattern unfolded: he bowed deeply, brooed louder, wagged his tail sidewise and started on his rounds with raised crest and displayed skin-patch. He trotted down the entrance driveway, looking from side to side, still somewhat hesitant, but continuing his ritual. Naturally I "hoped" he would go to the mirror and he did, with full ritual (The mirror could not be seen from any point in his route until after he had made his decision, for bank and shrubbery intervened; yet his course toward it, after it was once determined upon, was direct and rapid. He remembered the mirror and its function in his ritual of months ago). He next reversed his course, ran by my feet to the sage patch and there, after more vacillation, ate the mouse, 7 minutes after he had killed it.

Waits for "inspiration".

Pattern begins to unfold.

Starts on rounds.

Takes to mirror--full ritual.

Finally eats it.

February 8 ,Rhody was in has house at 10 P.M. I gave hin a mouse in the house and he killed it then he ate it. About ten minutes he came down and pick up some twigs and started to put in ~~the~~ has house,I leave him there,

Notes removed from typewriter February 10, 1939
February 8th notation made by Julio.
M.D.Champion

February 11. At about ten o'clock this morning Rhody, start singing when I call him ,he stop so he came to me and I gave him a mouse,he did not ate right away so he went to the mirror.

When he gets tired holding has mouse,then he ate it, then he start to picked some twigs,he went toward to has house but he drops them on the road,then he began to sing again. At 5:00 P.M. when I went to has house,on my way there he was on the fence,I offered him a mouse he didn't take it,so I followed him to has house he was in the house exactly half-fast five then I offered him the mouse he killed him then he ate it.

Feb.12. At 7: A.M. when I went and get the sunday morning papers I heard the Bewick-Wren making some noise scolding Rhody,on the road.Then I called Rhody,he came and I gave him a mouse,he did not want the big one so I gave him a little one he went around then he went on the roof,I lift him there.At 8:30 A.M. he began to sing on the roof,he stayed there 'till 10: A.M.

Feb.15. When I went and get the morning papers I ~~lo~~ look ar ound for Rhody,I called and called I can't find him a later on then Neo,came so I gave him some worms,after that he went on the big Oak-tree in the glade and begin to sing.Then I came home to do my work polishing my dinning ~~ro~~ room floors.At 10.00 A.M.Rhody came looking him self from the fishpond I offered him hamburger he didn't want it so I gave him a mouse. Feb.16.I did not see Rhody,the whole morning,the meat that I put in the glass-dish were gone so he was around someplace I look the meat dish at 9 o'clock. I went to has house at 5:40 P.M. he was in bed already I offered him a mouse he took it from the pole,then he ate it.

Sunday Feb.19. At 6:40 A.M. I went and get the morning papers I saw Neo,picking some twigs,I called him he didn't payno attention to me so I watch him. He went outside the fence then Longtail came behind me,so I tossed him some worms,later on Neo,came then I gave him worms,too.Then he began to pick up some twigs again then I followed him then I saw where the nest is,just outside the fence in the dead branch of the acacia near the glade. Feb.20. I feed them near the lime tree,both of them,Neo,is singing has softsong.

Feb.24. The nest was finish have no egg yet Neo,was calling has mate for fiften minutes then he stops,I think has mate is very far to hunt some foods.

Rhody,eats the hamburger so he want a mouse,just to carry around or go in show it to the mirror,and wagling has tails.

Feb.26.Thrashers still have no egg,Neo,was calling has mate in the nest but he did go he was with me eating worms, that I tossed him.I feed the Golden-crowned Sparrow, Dwarf-Hermit-Thrush,then Neo,and Long-tail came for worms again.I heard some noise behind me so I looked, it, was Rhody, I tossed him some worms,too,I said do you want a mouse Rhody? then he began going toward the tolls house then I followed him.

I gave him a very good size one he didn't ate it but he just want to carry around , and went and show it to the mirror,and wagling has tails.

Written by
Mr. Julio T. Tagañas

March 1. At 7.A.M. I hear Rhody,singing outside some place. But I could not see him so I called him and he came so I gave him a mouse,he didn't ate it he want only to carry around and he went and show it to the mirror.Later-on I heard Neo,calling then I went there to see what he was doing but when he saw me he stoped then I went closer I tossed some worms,then Longtail came then Dwarf-Hermit-Thrush came so I them some worms,too,then Neo,went up to the tree and sing again.

March 3. Neo,and Longtail still have no egg,Neo,was singing all morning but he can't bring has mate to their nest still going together,or some time they are talking to each others. I gave Rhody,a mouse then he flyed up to the roof and looked all over the country doing nothing there,but he was carrying the mouse all around .He does not know what to do so he came down and shwoed it to the mirror.

March 4. There were five Thrashers singing in the big pine-trees and some and the Oak-trees,too,Neo and Longtail, were in front the house,were singing about more then one hour. March 5.Neo,still calling has mate no egg yet.March 6.We have a little rain this morning at 7.A.M. I went and see Rhody in has house,and he still there I brought a mouse with me I offered it to him he didn't want it he just stayed there. At 2:30 P.M. I heard Neo,calling outside the fence then I went and see where he is,he was in the nest.I call him then he came down so I gave him some worms,later on then Longtail came I looked in their nest,but have no egg yet.This is the first time they have done this,I think they were getting old birds,thats why they can't lay anymore egg.

March 7. Today is very windy from south and it is very cloudy I can't find Rhody around here so I went to has house, but he was not there.Then I came home to do my work in the house.At 5:45 P.M. I went there again he wasn't there,then I began to called then later-on I heard a noise from the bushes it was Rhody,,so I gave him has mouse,he ate it right away he was very hungry.Then he began to go up to the ladder trees,it takes him only five minutes to be in has house,to windy thats why. March 8. Today is raining hard at 11.A.M. I went to Rhody'S house I brought hamburger with me and mouse,Rhody still in bed then I gave him the meat instead the mouse,he was hungry.March 9.Raining untill 1 o'clock P.M. Rhody was in the north-side of the house,thats why I didn't see him in has house awhile ago I went there two times it was not there.I called him from the back-door then he came I offered him hamburger he took it,tried to swallow it was to sticky then he change has mind then he went toward to the tools-house so I followed him,went in,get a mouse for him,I gave the mouse ate it right-away.Went back under the Pine-trees,to keep off the rain.Yesterday I saw a Robin he has a broken wing in the left-side wing.I tossed him some worms,he took them about ten feet away from me.This is the first time they came so close to me.This afternoon I saw him again I called him but he can't understand so I tossed him some worms he saw them then I make it closer and closer to me,then he came as close one foot away from me.

March 10. At 11. A.M. I went toward the cages I was calling Rhody,then he was there playing with the magpies I called him if he want a mouse,but he didn't payno attention to me.He came down but he was just going around and flapping has wings,I was so busy so I lift him there have no time to watch him like Mr.Dyer, did before.Then he ate the meat from the glass didh.

[illegible]
by
Julio Fagani

March 12. Rhody has been singing this morning around the orchards,I went there and called him but he did not pay noattention to me just went around and flapping has wing. He ate the meat in the dish.I went to has house at 5:45 P.M. he was in bed already,then I offered him hamburger,he took it from my pole. In my way home I saw Neo and Longtail in the fruits-trees then I tossed them some worms.I feed them boths.

March 13 Neo is in the nest.I feed the Trush,then I went and see Rhody to has house so he was in bed already I gave him a mouse. It was 5:30 P.M. At 6:25 P.M. Neo is in the nest tonight it is the first time since they finish their nest .

March 14 I feed Rhody,Hermit-Thrush,Golden-crowned Sparrow, and Neo,some worms at the same time,Long-tail is in the nest.

March 17 At 7:00 A.M. this morning I found Rhody in the cage doing nothing when I went in,he just stay there.I called him if he want a mouse but he didn't want anythings.

March 21 I feed the Golden-crowned Sparrow,Thrush,then later-on Neo,came Longtail was in the nest.

March 22. This afternoon Rhody,was playing with the magpies, I called if he want a mouse but did not want anythings he just keep going in play with them, About one hour he came where I was working,I went to the tools house he followed me then I gave a mouse,didn't eat it,he went to the mirror and show it there wagling has tails.Then I finish my work planting some snowballs where I was working I saw the Dwarf-Hermit Thrush,I tossed him some worms,later on Golden-crowned Sparrow,came I feed them boths.

At about 6.P.M. I found Rhody,in the acacia trees east side of the cages.The magpies were yealing I went and see what was the trouble but nothing.Then I went back and see Rhody,he was gone I can't find him then I went to see in has house if he is there but he wasn't there.I went back where he was looking around but couldn't find him so I went outside the fence if he is there where he make has nest 2 years ago I find him then I saw some branchs of the Oaktrees moving I look at them it was Rhody. I stayed there untill 6:15 so he sleep there for the last 2 nights thats why he was not in has house.

March 23. This morning 6:40 A.M. I went and see Rhody,where he sleep lastnight and he was still there. And I went to see Neo,in their nest he was there,then Golden-crowned Sparrow, saw me he came for worms,so I tossed him some. Came home and eat my breakfast.

About half an-hour I went and see Rhody,but he was gone I couldn't find him so called him in the cages,later-on bow,bow outside the cages,then he went in and the meat,then he began to play with magpies. At 5;40 P.M. I went and see where he sleep lastnight he was there,I think he sleep there for the last 3nights.It maybe some thing frightened him in has house thats why he moved.

March 24. This morning at 6:45 A.M. when I went and feed the magpies,I didn't see Rhody,in the cages when I came out he was by the inside door snicking him self among the bushes,he just stay there,then he went and eat the meat,that I put there. Then he followed me as far to the mouse cages,then I took one mouse I offered it to him didn't want it,then he heard the Magpies,yealing then he ranaway toward the cages,then he went and play with them,so I leave him there.

March 24. This afternoon when I was watering Rhody, came where I was working just watching me, I ask him if he want a mouse, then he started has talk, quack, quack, quack, then I went toward the mouse cages, then he followed me, I offered him one he didn't want it, then he followed me again.

He went and play with the Magpies, then I called him then he came, I showed the Owl, he was very coures about him he hasn't seen him for a long time, thats why he like to play with him. Then when he gets tired he went to the dinning room window and look at has shadow, then he went and look at the Owl again, go back and forths, and it looks to me that he was looking for Mr. Dyer, too, because before sometimes he came to the dinning room. And Mr. Dyer, let him inside. Then I didn't see where he went. At 5:45P.M. I went and see him where he sleep lastnight, he was there, the same tree, and the same branches.

March 26. Sunday. Today is raining at 7.A.M. I went and see Rhody, where he roosted lastnight, he wasn't there. Then I heard the Thrasher calling then I went there it was Longtail, he was in there nest, later on Neo, came to me and I gave him some worms. Then Longtail, calls Neo, went in the nest. I didn't see where he went I stayed for awhile then the Hermit - Thrush, Goldencrowned - Sparrow, came for worms.

Then I heard Longtail, skrip, skrip, from the almond tree so I went there then I saw him I called, he came, I tossed him some worms he ate them. Tonight Rhody, sleep again in the same tree, that show that something fridhtened him in has house.

March 27. At 6:45 A.M. I went and see Rhody, where he roosted lastnight he wasn't there already, then I went and the Thrashers, Longtail, was in the nest, then I saw Neo, digging under the sages, so I called him, then he came, he ate some worms, then when he got enought, he ran away. Then later on Rhody, came behind me, I said wh what do you want, Rhody ? then he began has talk, quack, quack, then I started going toward the mouse cages, so I he followed me, then I went in, I got slamands, in the bottles, thats why I didn't show him any mouse, I offered him some then he was trying to pick up some twigs for a nest, then he heard the Magpies, yealing, he ran toward the cages, he droped them then play with them so I lift him there.

At 6:05 P.M. Tonight Rhody, sleep again in the same tree. This afternoon I feed Neo, and the Hermit-Thrush, Longtail, was in the nest, then later on the Goldencrowned-Sparrow, came for worms, too, so I gave him some.

March 28. At 5:30 P.M. I went and see the Thrashers, when the Hermit-Thrush, saw me, he came and I gave him some worms, then Neo, came Longtail was in the nest. Then I went and find Rhody, but couldn't find him, so I went to see where he roosted lastnight, he wasn't there so I came home. At 6:50 P.M. I went back to see him, isn't there still, so I climb-up over the fence, then I starte to look around ,going thrugh the bushes, I was calling for him. Then later-on I heard some noises among the bushes, it was Rhody, I was talking to I offered him some worms, but he didn't want any, then I started to come home he followed me, then I stoped then going around circles to me, then I started coming home again he followed me, then he gets tired he went and see himself in the mirror, then he went under the Acacia-trees, he layed there, I'm watching him if what he is going to do, just fixching has ~~feathe~~ feathers, I watched him for 5minutes.

Then it was getting dark so he gets up, then he started going toward to has roosting tree, then he flew over the fen ce. So I followed him watching him then he jump to the trees, it was in bed at 6:07.

written
by
[illegible]

March 31. For the last 3 days Rhody, had done the same things sleeped at the same tree. This morning at 6:45 A.M. I went to feed the Magpies,when I was feeding them I heard some thing run away,then I turned around it was Rhody.Then I called him if he want a mouse,so I went toward the mousse cges,then he followed me,so I gave him one,he didn't eat it he just want to carry around,and show it to the mirror.

Then I went and see the Thrashers,I didn't see any ofthem so called,lateron Neo,came from the bushes,then I tossed him some worms,he didn't eat it but he took it to feed the youngsters in the nest,(two of them),it was the first time that I saw them,

April 1. This morning at 6:50. A.M. when I went and get the morning paperss and feed the Magpies,too,and see the Thrashers, when I was feeding Neo,Longtail,Goldencrowned-Sparrow,Hermit-Thrush, then Rhody,came so I gave him some worms,too,I asked him if he want a mouse,then he started going toward the tools-house so I followed him one,then he heard the Magpies,yealling then he ran away toward the cages,so I brought the mouse there,and offered it to him again he just didn't it,just going ahead and play with them.Then I lift him there.

April 2. Lastnight it rain,strong enought to wash the dust from the leaves,I was wondering if how the Thrashers,taking care of their youngsters.So this morning I get up early at 6:15 A.M. went there and see them,they were very dry alright.Then I call s later-on Neo,and Longtail,so I gave them some worms. At 5:40 P.M. I went and see Rhody,where he sleeped lastnight,he wasn't there,so I went and see to has house,he was in bed already.Then I offered him hamburger,he didn't want any.Then I went and see the Thrashers,I didn't see anyone so I call and call,then Neo, came so I gave him some worms.Then I saw the Hermit-Thrush,I call him then he came for worms,I didn't have enought worms,so I tossed him hamburger,he like them ,the first time I know he like meat.I am so very surprise that he ate 3 little peaces,first time I tried it,I try to Neo,but he don't care,he want worms, thats all,so I gave him some.

April 3. This morning when I went and get the morning papers w hen I was down the road Neo, saw me,then he came toward me,so I gave him some worms,and he feed those youngsters.
Rhody,sleep again to has house,and the west side of the lots,I went and see him at 6:45 P.M. I offered him some meat he didn't want any.

April 4. At 9:A.M. Rhody,was here around the fish-ponds looking around and seeing himself through the dinning windows I call him if he want some mouse,but he didn't want any then he went up to the roof and on the chimney looking all over the view.He sleep in has house tonight,I think he quiet in has roosting place in the north side of the big cages,now ever since the rain.

April 5. Rhody,did the sames things coming to the fish-ponds, and looking himself through the windows. About 1 O'clock P.M. he came to me where I was working and he want a mouse,so I gave him a very good size one. Then I went and see the Thrashers,Neo,saw me so I gave him some worms.

April 7. Tonight Rhody,went to bed very late he has been watching me where I was working I think he was little lonsome so thats why,at 6:10 P.M. still with me,then he was thinking about going to bed so he started going toward to has house,then I followed him he moves about 2 feet looking around I think he some hawks,a little frieghtned,it takes him in bed 6:50 P.M.

written
by
Julia [illegible]

April 9. Sunday, at 6:05 A.M.this morning when I went and gets the Sunday morning papers I pass by at Neo's nest I did not see him then I call and call then later-on he came from through the bu shes,I tossed him some worms,he didn't eat them he went and the younsgters,Longtail saw me then he came too,for worms. Rhody,sleep in has house tonight,he did the same things again he took a mouse from me but he didn't eat it he just want to carry around.

April 11. At 7:A.M. I heard Rhody,singing on the chimney then I went out to see him if he want a mouse,I call him down but he didn't pay no attention to me so he just go-ahead and sing.Then I see the Thrashers,as soon I get there the Golden-Crowned Sparrow, came to me for worms,then Neo,came he chase him away,then Longtail, came too,then I gave them both some worms,for the babys,when I came in,I look-up to the chimney,Rhody,was gone already.

April 13.

Lastnight Rhody,sleep in the same tree North-East side of the cages outside the fence,that means he don't like has house again. Or maybe because some man had cuts the bushes around under has house,it is now to open-space no place to hide himself. At 6:30 A.M. this morning I went and see the Thrashers,in the nest they were very dry I though they gets wet this morning because it rain this morning at 4:A.M. I didn't see Neo,or Longtail so I called them,then they begun making skrip,skrip,skrip,so I called them,then they stop.They came to me for worms,for the babys. When I was cleaning in the office-shop I heard somebody toping through the windows,it was Rhody,looking for the Owl,then I open the doors,then I called him inside. He didn't come then it just that he was under the bence already.So I put the Owl, outside from the shop,then Rhody,like to play with.

April 14.

Lastnight at 6:35 P.M. I went and see Rhody,to has house, but he wasn't there,then I went and see to has roost ing place he was there.I pass-by at Neo's nest,they saw me then they came for worms,so I gave them,then the Golden crowned-Sparrow,came too. This morning I feed Neo,and Longtail soem hamburger Neo,didn't care but Longtail took some he some,and he gave some to the younsgters,too.So I gave Neo,some worms.I heard some noise from the bushes,I watch who he was,it was Rhody,coming toward me.I tossed him worms,he ate them,the I asked him if he want a mouse,then he begin has talk again quack,quack,quack. Then I started moving toward to the tools-house,he followed me,I opened the door he was behind me,I get the mouse from the cages,then I called him to come inside a little bet scare,you better come in Rhody,and get this mouse ? the then he came in,I gave him a very big size one,he was hungry he eat it rightaway.

April 15. Rhody,sleep in has house tonight,this morning has been around the fish-pond looking himself,then when he gets tired he came where I was working and wat ching me,then I talked to him if he want some mouse,then he went to the tools-house door. So I went there and gave him a mouse,he didn't eat it,he just want to carry around. This afternoon one of the young Thrasher,left the nest,this morning Neo,and Longtail were taking some worms from me to feed the youngsters.The other one sleep in the nest tonight.

Written
by
Julia Fagaman

1702

April 16. Rhody,has been carrying some stuffs for nest,then I call him,he came to me then we went to the mouse-cages so I gave him one,he ate it. Then Neo,saw me he came to me for worms,he feed the one that is in the nest, the other one is in the sages-place,I did not see where Longtail is,so I think he is around some place to hunt some foods.

Rhody,sleep again in has house tonight,I went and see him at 6:40 P.M. In my way home I passed by where Neo's nest I look at their nest the young-one left has nest already,then I look-around for him for-awhile,then I heard him he was talking quip,quip, then I found him so he sleep amongs the honeysuckers,about fiften feet from their nest.

April 17 This morning when I was watering the fruit trees Neo,came to me for worms,so he feed the baby,he was in the sages.Then later-on Neo,went up to the big Oak tree. About one hour Rhody,came then he started to sing coo,coo,coo, I ask him if he want a mouse then he begin going incircles and flapping has wings.Then when he gets tired he came to me again so we went to the mouse cages,and get some,I gave him a big one,he didn't ate it,but he just want to carry around,and he went and show it to the mirror.

At 6:50 P.M. I went to has house and see if is there,so he was in bed already,I offered him another mouse he didn't want it so he has enought.

April 19. This morning at 6.A.M. Rhody,came to my window and tapping it,I ask him if what he wants,then I get up,I went outside then he came down,then we went to the mouse cages,so I gave him one.He didn't ate it then he went up on the Chimney.

Then I heard Neo,skriping so I went and see him if what the trouble was,it was only a Rabit near the baby-Thrasher,then I chase the Rabit,then he keep quite,he came for worms,so I gave him then he feeds him. Afterward the Goldencrowned-Sparrow came for worms,too, he didn't ate them he gave it to the youngsters,the nest is just outside the fence not very far from the Thrashers-nest.

Tonight Rhody,sleep again in has house,the young Thrasher sleep in the sages place.

April [illegible].

This morning at 6;30 A.M. Rhody, was playing with the Magpies already then when he saw me he stop and came down so I gave him hamburger,he ate it,later on he came near to me so he want a mouse to carry around,and show it to the mirror. At 10:00 A.M. he came to the dinning windows and he flapping has tails,going around with the mouse,then when he gets tired,he went up on the Chimney,he does not know what to do the mouse.

April 24. Rhody,sleep again in has house lastnight also the baby Thrasher,in the sages place.This morning I saw Rhody,picking up some stuffs for nest from the back door,then I called him,he drop them the he came nearer to me so I tossed him some worms,then we to the mouse cages,so I gave him one.Then I saw Neo,taking some suets for the baby,he saw me then he came down,I tossed him some worms,he saw them,then he took it,he didn't ate them,he gave it to the baby.Then Longtail,came for worms,too.,later on the Golden-crowned-Sparrow came for worms,too.

Tonight Rhody,sleep in has house,he was in at 6;45 P.M.

Written
by
Julio Bejarano